ASSESSMENT ON OUTCOME OF INFORMATION, EDUCATION AND COMMUNICATION (IEC) PACKAGE ON ASSISTED REPRODUCTIVE TECHNIQUES (ART) AMONG INFERTILE COUPLES

DISSERTATION SUBMITTED TO

THE TAMIL NADU DR.M.G.R.MEDICAL UNIVERSITY

CHENNAI

IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE AWARD OF

DEGREE OF

MASTER OF SCIENCE IN NURSING

APR, 2012

A STUDY TO ASSESS THE OUTCOME OF INFORMATION, EDUCATION, COMMUNICATION (IEC) PACKAGE ON ASSISTED REPRODUCTIVE TECHNIQUES (ART) AMONG THE INFERTILE COUPLES ATTENDING GG HOSPITAL, CHENNAI, 2011 – 2012

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In partial fulfillment of requirement for the award of degree of

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ACKNOWLEDGEMENT

I would like to thank **Lord Almighty** without blessing wisdom and direction nothing is possible.

I express my gratitude to the **Chairman R.Rangarajan, Vice Chairman, Sakunthala Rangarajan, Directors and managing Trustee** of Vel R.S. Medical College – College of Nursing for having given me this opportunity to undergo Post Graduate programme in this esteemed institution.

I consider myself fortunate to have been piloted by **M.Anuradha**, **R.N., R.M., M.Sc (N).,** Professor and Principal, Vel R.S Medical College – College of Nursing whose guidance and support enabled me to do the work. I shall always be thankful to her constant encouragement, valuable in-depth discussion and suggestion throughout the study.

I am privileged to express my hearty thanks to **K.Sudhadevi**, **R.N., R.M., M.Sc (N).,** Professor and Vice Principal for her constant impression and motivation to proceed with the study.

I extent my gratitude to **S.P.Vashumathi**, **R.N., R.M., M.Sc (N).,** Reader, HOD, Department of Maternal Health Nursing, Vel R.S Medical College – College of Nursing who has guided me as a good mentor and for her valuable suggestions, motivation and guidance throughout this dissertation.

I express my sincere thanks to **G.Karpagavalli, R.N., R.M., M.Sc (N),** Lecturer, Vel R.S Medical College –College of Nursing for her support, expert guidance and encouragement to carry out this dissertation.

I express my sincere thanks to **R.Arokia sophi, R.N., R.M., M.Sc (N).,** lecturer and **Bandla Latha, R.N., R.M., M.Sc (N).,**lecturer, for their support, expert guidance and encouragement to carry out this dissertation.

I extend my heartfelt thanks to **C.Susila, R.N., R.M., M.sc (N) ., Ph.D,** Professor and Principal, Bilroth college of Nursing, **Rosaline Rachel, R.N., R.M., M.Sc (N), Ph.D,** Professor and Principal, Indira college of Nursing for their valuable suggestions, constructive criticism and advice given throughout the study.

I extend my thanks to the maternal health nursing experts **Latha, M.Sc (N)., Ph.D,** for her valuable guidance, constructive criticism and in completing this study successfully.

I owe my profound gratitude and sincere thanks to **Kamala Selvaraj, M.D, D.G.O., Ph.D.,** Department of Obstetrics and Gynaecology, GG Hospital, Chennai for permitting me to conduct the study and providing valuable guidance and suggestions for the study.

I extend my grateful and thanks to all the **Medical** and **Nursing Experts** for giving expert opinion towards modification of the tools for data collection.

I am grateful to **G.K.Venkatraman, Elite Computers** for patiently deciphering the manuscript into a legible piece of work.

I extend my warmest thanks to **Mary Auxlin Nirmala, M.A., M.Ed.,** for editing the tool in English and **I. Maria Francisca Stella, M.A., B.Ed.,** for editing the tool in Tamil.

My Immense thanks to Librarian of **Vel R. S. Medical College – College of Nursing** and **The Tamil Nadu Dr.MGR Medical University** for their help in procuring literature when required.

My deepest thanks to my **parents** and my **sisters** for their indescribable support in every aspect of this whole study without their constant guidance, spiritual support encouragement and well wishes, the successful completion of this study would have not been possible.

I thank all my **classmates and friends** who directly and indirectly contributed towards the completion of my project.

Last but not least I would like to express my thanks to the **study participants** for their co-operation and participation, without whom this study would have been impossible.
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(Kowsar Bee.M)

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ABSTRACT

"Infertility is a common condition, occurring in approximately 10-15% of couple's world-wide". The prevalence is similar across racial and ethnic groups and apart from certain parts of Sub-Saharan Africa, is the same world-wide. Infertility is a world-wide phenomenon and is prevalent in every community. The psychological trauma of prolonged infertility on the couple is enormous. The Assisted Reproductive Techniques is the advance procedures and the couples should have adequate knowledge in order to face the infertility confidently.

The investigator conducted the study to assess the outcome of Information, Education and Communication (IEC) package on Assisted Reproductive Techniques (ART) among the infertile couples. The objective of the study was to assess the outcome of Information, Education and Communication programme on knowledge and attitude acquisition on Assisted Reproductive Techniques. Thus the investigator applied a modified Roy's adaptation model for the study.

The investigator used pre experimental one group pre test post test research design and sixty samples were selected by using random sampling technique (lottery method) that fulfilled the inclusion criteria. The investigator conducted the study at GG hospital, Chennai.

Descriptive and inferential statistics were used to analyze the data. Analysis of demographic variables was done in terms of frequency and percentage distribution. Independent sample't' test was used to analyze the effectiveness between pre test and post test group and chi square test was used to analyze the association between the demographic variables.

The findings concluded that in pre test, the majority 42(70%) of infertile couples has inadequate knowledge and in the post test, the majority 36(60%) infertile couples had adequate level of knowledge and 24(40%) of infertile couples had moderate level of knowledge. In the pre test, the majority 43(71.67%) of infertile couples has unfavourable attitude and in the post test, the majority 31(51.67%) infertile couples had favourable attitude and 29(48.33%) infertile couples had moderately favourable attitude. Hence the

Information, Education and Communication package was effective on assisted reproductive techniques on knowledge and attitude among the infertile couples. Hence the nurse midwife can motivate infertile couple's involvement in infertility care and imparting knowledge and attitude which can lead to healthier pregnancy and its good outcome.

CHAPTER – I

INTRODUCTION

"Life is tough enough without having someone kick you from the inside"

-RITA RUDNER

The desire to procreate is a universal phenomenon. In some population, childlessness is regarded as failure and has been known to be the cause of marital break-ups. Infertility primarily refers to biological inability of a person to conception. Infertility also refers to the state of woman, who is unable to carry a pregnancy to full term.

World Health Organisation (2004) defined, Infertility as the inability to conceive a child after one or two years without the use of contraceptive and with frequent intercourse.

NICE Guidelines (2002) defined, Infertility as the failure to conceive after regular unprotected sexual intercourse for 2 years in the absence of known reproductive pathology.

Infertility is a major health care problem, which has both physiological and psychological implications.

BACKGROUND OF THE STUDY

The Reproductive Endocrinologist states that, a couple is eligible for treatment if a woman under 35 years has not conceived after twelve months of contraceptive free intercourse. Twelve months is the lower reference limit for Time to Pregnancy (TTP) by World Health Organisation and a woman over 35 years of age has not conceived after six months of contraceptive free sexual intercourse.

Hrishikesh Pai, vice president of the Indian Society of Assisted Reproduction, states that nearly thirty million couples in the country suffer from infertility, making the incidence rate of infertility couples at 10%. This is a huge number and increasingly they have seen cases of male

infertility rising due to several life style changes along with the medical complications. Smoking and Alcohol consumption remain as the top causes in affecting the sperm count in men. In addition men should avoid working in very high temperature as this reduces the sperm count.

According to International Institute of population studies, Tamil Nadu failed the worst among Indian states with almost 11% of married women being childless. Chennai, Hyderabad and Chandel district in Manipur could considered as the "Infertility Hubs" with one in five (nearly 20 %) women being childless.

Zargar et al., (2010) conducted a survey to study the occurrence of Infertility cases and major factors influencing infertility in southern districts of India. About 150 married couples in Kanyakumari, 165 in Thirunelveli, and 204 in Thiruvananthapuram were randomly interviewed to ascertain the prevalence of infertility. The prevalence of female infertility was 45.67 % in Kanyakumari, 44.24 % in Thirunelveli, and 41.91 % in Thiruvananthapuram. The results showed that Primary infertility is as common distressing problem in India as in other parts of the world. It was concluded that the primary infertility was more dominating than secondary infertility in South India.

ICMR(Indian Council of Medial Research), (2008) launched a pan-Indian study of Infertility, the first ever stated that, out of 250 million individuals conservatively estimated to be attempting parenthood at any given time, thirteen to nineteen million couples are likely to be infertile. Based on the census reports of India in 2001, 1991, 1981 researchers show that childlessness in India has raised by 50 per cent since 1981. The results claims that it is primarily due to growing infertility and not because couples are choosing not to have children.

While marital childlessness rate (number of ever-married women aged 15-44yrs with no children ever by total population of ever-married women in the same age group) has gone up from 11 to 16 per cent, 'permanent childlessness' has zoomed from 3.89 to 7.47 per cent. Between 1981 and 2002 the number of married or separated women with age group of 35 to 49 years old, the childlessness rate was jumped from 4 to 6 percent.

Dutta (2000) describes that 80 % of the couples achieve conception if they desire, within one year of having regular intercourse with adequate frequency (four to five times a week). Another 10 % will achieve the objective by the end of second year.

Generally, worldwide it is estimated that one in seven couples have problems in conceiving, with the incidence similar in most countries independent of the level of the country's development. Fertility problems affect one in seven couples in the United Kingdom. Most couples (about 84 out of every 100) who have regular sexual intercourse (that is, every two to three days) and who do not use contraception will get pregnant within a year. About 92 out of 100 couples who are trying to get pregnant do so within two years. Women become less fertile as they get older. For women aged thirty five years, about 94 out of every 100 who have regular unprotected sexual intercourse will get pregnant after three years of trying. For women aged thirty eight years, however, only 77 out of every 100 will do so. The effect of age upon men's fertility is less clear. In people going forward for In Vitro Fertilization (IVF) in the United Kingdom, roughly half of fertility problems with a diagnosed cause are due to problems with the man, and about half due to problems with the woman. However, about one in five cases of infertility has no clear diagnosed cause. In Britain, male factor infertility accounts for 25% of infertile couples, while 25% remain unexplained. 50% are female factors with 25% being due to an ovulation and 25% tubal problems or others.

Nadkarni P, (1992) reported that the Infertility is a common condition, occurring in approximately 10-15% of couple’s worldwide. The prevalence is similar across racial and ethnic groups and apart from certain parts of Sub Saharan Africa, is the same worldwide. Infertility is a worldwide phenomenon and is prevalent in every community. The psychological trauma of prolonged infertility on the couple is enormous.

Malpani A et al., (1991) stated that when the couples are diagnosed with infertility many couples feel helpless and no longer in control of their bodies or their life plan. Infertility can be a major crisis because the important life goal of parenthood is threatened. Most couples are accustomed of planning their lives and experience has shown them that if they work hard at something they can achieve it but with infertility that may not be the case. However not all stress

faced by infertile couple is emotional or psychological. Infertility treatment can be physically stressful as well blood test, injections, hysterosalphingograms, inseminations and surgery can be painful, awkward and embarrassing.

WHO (2001) reported that 60-80 million people experience infertility around the world and most of those people live in developing countries. In India, infertility affects 10 to 15% of couples in reproductive age group.

According to the Centers for Disease Control and Prevention (CDC), In Sweden, approximately 10 % of couples are infertile. In approximately one third of these cases, the man is the factor, in one third the woman is the factor and in the remaining third the infertility is a product of factors on both parts. About ten percent of women (6.1 million) in the United States aged 15 to 44yrs have difficulty in getting pregnant or staying pregnant.

Infertility is a threatening medical problem, thus it is the responsibility of the midwife to impart knowledge about the Advance Assisted Reproductive Technology to the infertile couples. This would provide with valuable information for the health care providers to offer the best atmosphere to help the women in their ongoing acceptance of the fertility dilemma and to cooperate for the treatment confidently.

SIGNIFICANCE AND NEED OF THE STUDY

The Infertility is a tragic condition. The agony and trauma of sub fertility is best felt and described by infertile couple themselves. For those who cannot achieve a pregnancy, feelings of failure, depression, isolation, guilt and anger accompany their desire for a child. Acknowledgement of these intense feelings aids the couple in their search for solution and acceptance of the testing and treatment procedures.

The special programme on Research Development and Research training in Human Reproduction of World Health Organization has estimated that there are 60 to 80 million infertile couple worldwide. In India, it has been estimated that 10 to 15 % of couples are Infertile.

Sapir et al., (2007) estimated that 10 % to 20 % of couples will be unable to conceive after one year of attempting to become pregnant. The chances for pregnancy occurring in healthy couples who are both under the age of thirty and having intercourse regularly are only 25 % to 30 % per month. A women's peak fertility occurs only in her early twenties. As a woman ages beyond thirty five, the likelihood of conceiving will be diminished to less than 10 % per month.

Nagesh Kumar.S., (2002) stated that the Federation of Obstetrics and Gynaecological Societies of India (FOGSI) will fully support the Government in enforcing the guidelines for fertility clinics in spite of opposition from a section of IVF (In Vitro Fertilization) doctors. The issue of regulating Assisted Reproductive Techniques (ART) has gained importance as fertility clinics have emerged in India seeking to attract infertile couples estimated at 10 to 15 per cent. Some make incredible claims through high pitch publicity about curing infertility and are often accused of overcharging.

Ramalingam M., (2000) stated that the problems of infertility have assumed an increased importance in health care system in recent years. In India about 10 million couples in the age group of 18 – 40 years are infertile and 70 to 80 % can be treated with routine treatment.

WHO (2000) epidemiological studies quoted that the prevalence rates for infertility in India as 3% in primary and 8% in secondary infertility. This article further explained that, in India, data from various community based studies on childlessness from different states showed that between 5 to 18 % of the women reported childlessness as one of their gynaecological problems. Childlessness varies across the states, while AndhraPradesh showed an infertility rate of 4.4 %, Tamil Nadu showed an infertility rate of 3.5 % and Haryana and Assam showed the same infertility rate of 1.4 % etc. The estimated rate of infertile couples in India is approximately 17.6 millions.

Currently, In India most of the facilities for infertility management, through the application of assisted reproductive technologies, are offered through the private sector in some metropolitan cities. It is estimated that the cost per cycle, with a take home baby rate of just 20 to 30%, is between Rs.50, 000 to Rs.75, 000 which is in addition to the subsequent obstetric costs.

Jerka et al., (2006) stated that the financial and psychological costs of Infertility can be immense and leads to more stress to the couples. Midwives are vital members of infertility healthcare and responsible for health assessment, client education and the counseling.

Couples in their most active and productive years are distracted by the physical, financial and emotional hardships of the infertility. For them it is a devastating life crisis which can greatly impact the couples general health, family relationship, job performance and social interactions. Added to the emotional and physical toll exacted by infertility, the financial burden carried by some couples seeking treatment for their disease. Thus the investigator considered educating , creating awareness would help them to learn more about Assisted Reproductive Technology by means of providing comprehensive Information, Education and Communication. Thus it would improve the knowledge, attitude and the confident level of the couples by understanding their problem and to fulfil their needs thus making infertility an affordable one.

TITLE

Outcome of Information, Education, Communication (IEC) package on Assisted Reproductive Techniques (ART) among Infertile Couples attending selected Infertility hospital, Chennai.

STATEMENT OF THE PROBLEM

A study to assess the outcome of Information, Education, Communication (IEC) package on Assisted Reproductive Techniques(ART) among Infertile Couples attending GG hospital, Chennai(2011).

OBJECTIVES

1. To assess the pre test level of knowledge and attitude on Assisted Reproductive Techniques among infertile couples.
2. To assess the post test level of knowledge and attitude on Assisted Reproductive Techniques among infertile couples.

3. To determine the outcome of Information, Education, Communication (IEC) package regarding Assisted Reproductive Techniques (ART) among infertile couples.
4. To co-relate the post test level of knowledge with attitude on Assisted Reproductive Techniques.
5. To associate the post test level of knowledge and attitude on Assisted Reproductive Techniques with the selected demographic variables.

VARIABLES OF THE STUDY

The variable under this study are independent variable and dependent variable.

Independent Variable

Information, Education and Communication

Dependent Variable

Knowledge and Attitude

Demographic Variables

Age, Religion, Educational Status, Income, Family type, Type of marriage and Source of health information.

RESEARCH HYPOTHESIS

H_1: There is significant difference between the pre test and post test level of knowledge and attitude among infertile couples on Assisted Reproductive Techniques (ART).

H_2: There is significant correlation between the post test level of knowledge and attitude among infertile couples on Assisted Reproductive Techniques (ART).

OPERATIONAL DEFINITIONS

Outcome

It means producing an intended result.

In this study it refers to determine the extent to which the teaching program on Assisted Reproductive Techniques among infertile couples has brought the result intended that is

measured in terms of significant difference in pre test and post test level of knowledge by using standard structured questions and attitude scores by using modified 3 point Likert scale.

IEC

It refers to Information, Education and Communication.

Information on Assisted Reproductive Techniques like In Vitro Fertilization(IVF),Zygote Intra Fallopian Transfer(ZIFT),Gamete Intra Fallopian Transfer (GIFT),Intra Cytoplasmic Sperm Injection(ICSI), Intra uterine insemination(IUI) and Surrogacy to educate the infertile couples through pamphlets.

Education and Communication on methods of Assisted Reproductive Techniques like In Vitro Fertilization(IVF), Zygote Intra Fallopian Transfer(ZIFT), Gamete Intra Fallopian Transfer(GIFT), Intra Cytoplasmic Sperm Injection(ICSI), Intra Uterine Insemination(IUI) and Surrogacy through video teaching programme.

Knowledge

It refers to the awareness about Assisted Reproductive Techniques as measured by structured questionnaire.

Attitude

It refers to opinion or feelings of infertile couples about Assisted Reproductive Techniques as measured by modified 3 point Likert scale.

Infertile Couples

It refers to both husband and wife who receive treatment for infertility with age group between 26-45 years.

ART

It refers to Assisted Reproductive Techniques.

Assisted Reproductive Techniques is the process of uniting the sperm and egg by artificial or partially artificial means to achieve pregnancy.

The technique includes In Vitro Fertilization (IVF), Intra Cytoplasmic Sperm Injection (ICSI), Gamete Intra Fallopian Transfer (GIFT), Zygote Intra Fallopian Transfer (ZIFT), Intra Uterine Insemination (IUI) and Surrogacy used to achieve pregnancy by artificial or partially artificial means.

ASSUMPTIONS

1. The infertile couples may not have adequate knowledge and favourable attitude on Assisted Reproductive Techniques.
2. Providing IEC package may enhance the infertile couples knowledge on Assisted Reproductive Techniques.
3. Adequate knowledge on Assisted Reproductive Techniques may lead to positive attitude among infertile couples.

DELIMITATIONS

1. The study was delimited for a period of 1 Month of data collection.
2. The study was delimited to selected hospital.

PROJECTED OUTCOME

1. The study would enable the infertile couple to improve knowledge and attitude on Assisted Reproductive Techniques.
2. Application of study findings would help the infertile couple to improve their knowledge and attitude on Assisted Reproductive Techniques.

SUMMARY

This chapter dealt with the background of the study, significance and need for the study, title, statement of the problem, objectives, variables, research hypothesis, operational definitions, assumptions, delimitations and projected outcome.

ORGANISATION OF THE REPORT

The following chapter contain

Chapter – II : Review of literature and conceptual framework

Chapter – III : Research methodology

Chapter – IV : Data analysis and interpretation

Chapter – V : Discussion

Chapter – VI : Summary, recommendations and limitations

This is followed by references and appendices.

CHAPTER – II

REVIEW OF LITERATURE

A review of literature is an essential part of scientific research. It is systematic identification, location, scrutiny and summary of written materials that contain information relevant to the problem. An extensive review was done to gain insight in to the selected problem.

The literature gathered from exclusive review is depicted under the following heading.

Part I : Review of related literature.

Part II : Conceptual framework.

Part I-Review of Literature

Review of literature is broadly classified into three sections as follows:

Section A: General Information on Assisted Reproductive Techniques (ART).

Section B: Literature related to Infertility.

Section C: Literature related to Assisted Reproductive Techniques.

Section A: General information on Assisted Reproductive Techniques (ART)

DEFINITION

Infertility means inability to conceive or carry a child to delivery.

Dutta, D.C., (1994) defined infertility as a failure to conceive within one or more years of regular unprotected coitus.

INCIDENCE

About 10 to 20% of couples cannot have a baby when they desire. The incidence of male infertility is up to 30% and the female infertility is up to 40%, approximately one-third of infertility problem includes both the partners. And one of three couples remains unexplained.

Pilliteri, A. (2003)

ASSISTED REPRODUCTIVE TECHNOLOGY

Maroulis, et al., (1994) stated that assisted reproductive techniques hold promise for women older than 35years or who require donor oocytes for pregnancy.

INTRAUTERINE INSEMINATION (IUI)

IUI can be employed with either therapeutic insemination of husband or donor. The semen is washed by a technique called swim up; the most motile fraction of the sperm is obtained and used for transfer through a flexible polyethylene catheter. Post washing count should be at least 1 million per ml, or more. A monthly schedule of two inseminations on alternate days is preferred. The result varies widely in different centres, ranging 10-30 percent. The best results are obtained in the treatment of cervical factor and unexplained infertility and in stimulated cycle.

Lowder Milk, D.L et.al., (2006)

INTRA CERVICAL INSEMINATION (ICI)

In this technique 0.5ml of the semen should be placed into the cervix; the remainder is sprayed against the external os. The patient remains in the same position for ten to fifteen minutes. The alternative approaches are the use of cervical cap.

Dutta, D.C., (1994)

INRACYTOPLASMIC SPERM INJECTION (ICSI)

Intra Cytoplasmic Sperm Injection is the placement of single spermatozoa into the oocyte cytoplasm. This technique is particularly beneficial in severe male factor infertility including azoospermia. The oocyte cytoplasm is injected after microsurgical sperm aspiration from the epididymis, after testicular sperm aspiration with a needle, or after open biopsy testicular sperm extraction.

Reader et al., (1997)

INVITRO FERTILIZATION AND EMBRYO TRANSFER (IVF-ET)

The past decade has witnessed at least two dramatic changes in the technique protocol of IVF-ET. One such was change of natural cycle to super ovulation protocol and the other one was replacement of laparoscopy by vaginal sonography for ovum retrieval.

Dutta, D.C., (1994)

Steps are

Induction of super ovulation

For this technique collecting the oocyte from a natural cycle, 36 hours after the onset of LH surge is essential. But subsequently, it has been found that the success rate is much higher when more embryos are transferred which is only possible by ovarian hyper stimulation. Drugs commonly used are Clomiphene citrate, (CC+) Human Menopausal Gonadotrophin (HMG), CC+Pure FSH, HMG, FSH, GnRH analogues+ HMG pure FSH.

Dutta, D.C., (1994)

Monitoring of follicular growth

The follicular growth response is monitored by cervical mucus study sonographic measurement of the follicles and serum estradiol estimation commencing on the eighth day treatment cycle. When three or more follicles are greater than 18mm in diameter and serum E2 level greater than 250pg/ml/per follicle, 5000-10000IU of HCG is given intramuscularly36 hours prior to oocyte retrieval.

Dutta, D.C., (1994)

Ovum retrieval

At the present time, laparoscopic oocyte retrieval has been almost completely replaced by ultrasound guided retrieval. With vaginal needle aspiration is done about thirty nine hours after hCG administration but before ovulation occurs. After recovery, the oocytes are maintained in

culture in vitro for a few hours.

Dutta, D.C., (1994)

Fertilization (in vitro)

The sperm used for insemination in vitro is prepared by the wash and swim-up technique. Approximately 50000 to 100000 sperm are placed in to the culture media containing the oocyte within three to four hours after retrieval. The eggs may demonstrate signs of fertilization when examined twelve to twenty four hours after insemination. The semen is collected just prior to ovum retrieval.

Dutta, D.C., (1994)

Embryo-transfer

The fertilized ova at the four to eight cell stages are placed into the uterine cavity close to the fundus about forty-eight to seventy-two hours later through a fine flexible tube transcervically. Not more than three embryos are transferred per cycle to minimize multiple pregnancies.

Dutta, D.C., (1994)

It is more invasive and expensive procedure than IVF but the result seems better than IVF. In this procedure both the sperm and the unfertilized oocytes are transferred into the fallopian tubes. Fertilization is then achieved in vivo. The prerequisite for gift procedure is to have normal uterine tubes. The overall pregnancy rates are as high as 30-40 %.Take home baby rate is about 20 %.

Lowder milk, D.L et.al., (2006)

ZYGOTE INTRAFALLOPIAN TRANSFER (GIFT)

The placement of the zygote into the fallopian tube can be either through the abdominal ostium by laparoscope or through the uterine ostium under ultrasonic guidance. This technique is a suitable alternative of GIFT when defect lies in the male factor or in cases of failed GIFT.

Littleton, L.Y et al., (2007)

MICRO-INSEMINATION SPERM TRANSFER (MIST)

When the sperm abnormality is severe, micro insemination technique will be helpful. Micro-insemination in this sperm is directly deposited in the perivitelline space of the oocyte.

Reader et al. (1997)

SURROGACY

When women agrees to become pregnant and deliver a child for the contracted party. It may be own biological child conceived through In Vitro Fertilization or Embryo Transfer using another woman's ova.

ADOPTION

In spite of excellent advanced in the field of infertility management expectations are not always fulfilled, couples must understand the infertility factors, cost and risk of management.

The couples must understand the condition realistically and they should realise that adoption is an alternative treatment.

Section B: Literature related to Infertility

Curropin Urol.(2011) conducted an experimental study on Robotic approaches for male infertility and chronic orchialgia microsurgery at Winter Haven hospital, Tennessee, USA , to find out the improvement in the rate of return of postoperative sperm counts compared to the pure microsurgical technique. The study findings showed that the robotic microsurgical procedures and tools for infertility and chronic orchialgia or testicular pain such as vasovasostomy, vasoepididymostomy, varicocelectomy, testicular sperm extraction and targeted denervation of the spermatic cord and the use of robotic assistance to decrease operative duration and improve the rate of postoperative sperm counts compared to the pure microsurgical technique.

Bhattacharya (2010) conducted a population based relevant study on the feasible and relevant definition of Infertility among selected literatures at University of Aberdeen, Aberdeen, United Kingdom. The literatures from MEDLINE, EMBASE, CINAHL and Cochrane Database of Systematic Reviews were searched for relevant population based prevalence studies published between 1975 and 2010. The results incorporated from a total of 39 articles and showed that there is considerable variation in terms of the duration of 'trying for pregnancy', the age of women sampled and their marital or cohabitation status. It was concluded that there is a need for an agreed definition for infertility. Thus they suggest a clinically relevant definition based on the duration of trying for pregnancy coupled with female age.

Nader (2009) conducted a study on infertility and pregnancy in women with polycystic ovary syndrome at University of Texas Medical School, USA. Purposive sampling method was used to select 240 women. The study concluded that the methods used to become pregnant options include the use of clomiphene citrate, insulin sensitizers, and the combination. Protocols for ovulation induction with follicle stimulating hormone (FSH) injections are outlined and the relative risks of multiple gestation and severe ovarian hyper stimulation syndrome were also used. They showed that the use of aromatise inhibitors and the occasional use of glucocorticoids are briefly reviewed, and pregnancy rate was high through the indications for In Vitro Fertilization and laparoscopic ovarian diathermy.

Stemler R. et al (2009) conducted an observational study on the results of infertility investigations and 18 months follow-up among 312 infertile women and their partners in Kigali, Rwanda. Between November 2007 and May 2009, an infertility research clinic was opened. Infertile couples received basic infertility investigation, the needed treatment was provided and couples were followed up over a period of 18 month period. The infertility remained unexplained in 3 %, was due to a female factor in 31 %, due to a male factor in 16% or due to a combination of male and female causes in 50 % of fully investigated infertile couples (n = 224). The tubal factor was found in 69 % of women, a male factor in 64 % of men. Predictors for tubal infertility in women included a history of high risk sexual behaviour, HIV infection and a history of sexually transmitted infection (STI) symptoms in the male partner. After 12 to 18 months of follow-up, 40 pregnancies (16 %) were achieved among 244 women. The study showed high rates of tubal and male factor infertility and the pregnancy rates were low after conventional therapy.

J.J.Cult Divers (2008) conducted a comparative study on Male Infertility attitude between African American and White Men at Tuscaloosa, Bahrain. The method used are Cycle 6 National Survey of Family Growth, male interview data with Chi-Square analysis was conducted. The findings showed that there was a statistically significant difference in attitude about not fathering a child, but no other statistically significant differences. They concluded that the men have stronger attitudes about not fathering a child and it showed that

the infertility is the same for African American and White men.

Imam (2006), conducted a cross-sectional study to assess the Knowledge, perceptions and myths regarding infertility with 447 adults who were accompanied the patients at two tertiary care hospitals in Karachi, Pakistan. They were interviewed one-on-one with the help of a pretested questionnaire and the result showed that the correct knowledge of infertility was found to be limited amongst the participants. Only 25 % correctly identified when infertility is pathological and only 46 % knew about the fertile period in women's cycle. People are misinformed that use of Intra Uterine Contraceptive Devices (53 %) and Oral contraceptive pills (61 %) may cause infertility. Beliefs in evil forces and supernatural powers as a cause of infertility are still prevalent especially among people with lower level of education. Seeking alternative treatment for infertility remains a popular option for 28 % of the participant as a primary preference and 75 % as a secondary preference. IVF remains an unfamiliar (78 %) and an unacceptable option (55 %). The results showed that the Knowledge about infertility is limited in the population and a lot of misconceptions and myths are prevalent in the society.

Willich (2005) conducted a Quantitative study on the Patient counselling on the risk of Infertility and its impact on childhood cancer survivors at Charity University, Berlin, German. The questionnaire was answered by 2754 adult childhood cancer survivors (53.1% female, mean = 25.7 years). In 1980 to 1984 67%, in 2000 to 2004 50% of the patients reported no memories of counselling ($p < .001$). Counselled patients feared significantly less that their children may have an increased cancer risk (4.4% vs. 6.7%, $p = .03$). They were also more likely to undergo fertility testing than patients who could not recall counselling. Patients reported an increased memory of patient over the past 25 years. Still, a 50% rate of recalled counselling shows an ongoing need for adequate and especially sustainable counselling of paediatric cancer patients about infertility and other long-term treatment for adverse effects.

Wharton (2003) conducted an exploratory study on Infertility and its causes associated in pesticide workers in a California pesticide factory. Around 2500 samples were included in this study. The results showed that the suspected cause was exposure to the chemical 1, 2-dibromo-

3-chloropropane (D.B.C.P.). The major effects showed that 14 of 25 non-vasectomised men and remaining workers were azoospermia or oligospermia and raised serum levels of follicle stimulating hormone and luteinising hormone. Although a quantitative estimation of exposure could not be obtained, the observed effects appeared to be related to duration of exposure to D.B.C.P.

Keskin (2002) conducted a comparative study to find the differences in the prevalence of sexual dysfunction between primary and secondary infertile women in Bandura hospital, Turkey.122 primary infertile and 51 Secondary infertile women were selected. A standard Questionnaires (Female Sexual Function Index [FSFI] and Beck Depression Inventory were the tool used. The results showed that the prevalence of female sexual dysfunction was 64.8% (n = 79) in primary infertile women and 76.5% (n = 39) secondary infertile women, respectively. In analysis of mean overall and subgroup scores of FSFI, there were significant differences between primary and secondary infertile women in the mean scores of orgasm, satisfaction, and total FSFI. Secondary infertile women had a 9.5 fold higher risk of sexual dysfunction than primary infertile women after adjustment for confounding factors. They concluded that there was a higher prevalence of sexual dysfunction in secondary infertile women. Secondary infertile women have decreased sexual desire, orgasm, and satisfaction compared with primary infertile women.

Hull (1999) conducted an Endocrinological and Demographical study to assess the epidemiology of infertility and polycystic ovary in Bristol Maternity Hospital, Bristol, United Kingdom (UK). Four groups of infertile women with oligo-amenorrhea due to ‘functional’ disorder were compared. The studies revealed that, overt and occult polycystic ovary disease (PCOD) was accounted for 90 % of patients with oligomenorrhea and 37 % with amenorrhea, or 73 % with oligo or amenorrhoea.21% of couples with oligo or amenorrhoea associated infertility and the annual incidence was 247 patients per million of the general population. The annual incidence of infertility due to PCOD per million was 41 with overt PCOD and 139 with occult PCOD (total 180). Of those, 140 appeared to respond well to clomiphene (78%) but 40 (22%) failed, requiring alternative therapy.

Section C-Literature related to Assisted Reproductive Techniques

Martin (2011) conducted a systematic study on assisted hatching of human embryos, a systematic review and meta-analysis of randomized controlled trials. Analysis was based on risk ratio (RR) and 95% confidence intervals (95% CIs) using Mantel-Hansel random effects model among 5507 participants. Assisted Hatching was related to a trend toward increased clinical pregnancy for all participants (RR = 1.11, 95% CI = 1.00 to1.24), with a significant increase in subgroups 2 (RR = 1.73; 95% CI = 1.37 to2.17) and 4 (RR = 1.36; 95% CI = 1.08 to 1.72, P< 0.01), but not for subgroups 1 and 3. For multiple pregnancy, a significant increase was observed for all participants (RR = 1.45; 95% CI = 1.11-1.90) and for subgroups 2 (RR = 2.53; 95% CI = 1.23-5.21) and 4 (RR = 3.40; 95% CI = 1.93-6.01). No significant Heterogeneity was observed in subgroup analysis.

Lewis et al., (2010) conducted a study on the success rates of ART in Christopher hospital in India among 500 infertile couples .Randomised sampling technique was used and the results showed that the combined super ovulation and IUI yields pregnancy rates of about 10 to 25 % per cycle ,an average of approximately 15 % per cycle .IUI alone yields pregnancy rates of about 5-10% per cycle, for Intra Cervical Insemination(ICI) the pregnancy rate is 10%, for ICSI it was 31%, for IVF-ET it was approximately 27% per controlled ovulation cycle and 29% deliveries per retrievals , for Zygote Intra Fallopian Transfer (ZIFT) the success rates was 37% , for Gamete Intra Fallopian Transfer(GIFT) it was 32 % per retrieval and for the Micro- insemination Sperm Transfer(MIST) it was low birth rate ranging from 1 to 3%.

Olive D et al., (2010) a randomised control study on exploring the difference between the day three versus day two Embryo Transfer following In Vitro Fertilization or Intra Cytoplasmic Sperm Injection. Ten studies involving 2027 women were included, but only three studies reported live birth and four reported ongoing pregnancy rates. The pooled odds ratios (day three compared to day two) were 1.07, (95 % CI= 0.84- 1.37) for live birth and 1.05, (95 % CI= 0.83-1.32) for ongoing pregnancy. From ten studies, the pooled odds ratio for clinical pregnancy was 1.26, (95 % CI= 1.06- 1.51). The results showed that although an increase in clinical pregnancy rate with day three embryo transfer, at present there is not sufficient good

quality evidence to suggest an improvement in live birth when embryo transfer is delayed from day two to day three.

Connell (2009) conducted a case-control study on workplace exposure and male Infertility at the University of Mansoura, Egypt. The case control method was carried out from January 2008 to February 2009; on 255 infertile men and 267 fertile men controls. Occupational exposure to certain chemical, physical hazards psychological workplace hazards was assessed by self-report questionnaire. Analysis was based on the Odds Ratio(OR) and Confidence Interval(CI).The results showed that the workplace exposure factors significantly increased the risk of male infertility such as solvents and painting materials (OR= 3.88, 95% CI= 1.50 -10.03), lead (OR= 5.43, 95% CI= 1.28- 23.13), VDTs and computers (OR= 8.01, 95% CI= 4.03-15.87), shift work (OR= 3.60, 95% CI= 1.12 - 11.57) and work-related stress fairly present as (OR=3.11, 95% CI=1.85-5.24)often present as (OR= 3.76, 95% CI=1.96-7.52).It was concluded that it has to pay attention to minimize the exposure to the workplace hazards that may affect the fertility of male workers.

Lancet (2008), conducted a population based cohort study on the Effects of Technology or maternal factors on perinatal outcome after assisted fertilization at IVF Unit, Department of Obstetrics and Gynaecology, St Olavs University Hospital, Trondheim, Norway. The differences was in birth weight, gestational age and odds ratios (OR) of small for gestational age babies, premature births, and perinatal deaths in singletons (gestation greater than or equal to twenty two weeks (or) birth weight greater than or equal to 500 gm) born to 2546 Norwegian women was assessed. The women above 20 years of age, who had conceived at least one child spontaneously and another after assisted fertilization were included. Among 1200 births with spontaneous conception and 8229 with assisted fertilization, the results showed that the assisted fertilisation conceptions were associated with lower mean birth weight (difference 25 g, 95% CI =14-35), shorter duration of gestation (2.0 days, 95% CI= 1.6 -2.3) and increased risks of small for gestational age (OR 1.26,95 % CI= 1.10 t- 1.44), and perinatal death (1.31, 95% CI= 1.05-1.65) than were spontaneous conceptions. For assisted fertilization versus spontaneous conception in the sibling-relationship comparisons, the OR for small for gestational age was 0.99 and that for perinatal mortality was 0.36.

Simon (2007), conducted Retrospective analysis study of 1217 IVF cycles in women aged 40 years above at the IVF Unit, Department of Obstetrics and Gynaecology, Hadassah Hebrew University, Israel. The study was a retrospective summary of the files of all patients aged 40 years and above at advent of IVF, between 1995 and 2004. Totally, 381 women underwent 1217 initiated treatment cycles in which Embryo transfer was performed in 62.6 %. The results showed that the Success rates declined with each year after age 40. Pregnancy and delivery rates were 13.9% and 9.1% at age 40 and 2.8% and 0.7% at age 45. There were no deliveries at an older age. Retrieving more than four oocytes increased pregnancy rates in all women over 40. Transferring 3 embryos or more increased pregnancy rates in all ages, but reached statistical significance only in women aged 40-41yrs. It was concluded that in women between 40 and 41 years of age, ovarian response is a major determinant of success, but not in women older than that.

Proctor M (2007) conducted a comparative study on evaluating the efficacy of the various sperm retrieval techniques in men with azoospermia prior to ICSI. The objective of the study was to evaluate the efficacy of the various surgical retrieval techniques for men with obstructive and non- obstructive azoospermia prior to ICSI. The Randomised controlled trials (RCTs) method was used as two trials in 98 men. The first small RCT had 59 participants and compared two epididymal techniques. The results showed that microsurgical epididymal sperm aspiration (MESA) achieved a significantly lower pregnancy rate (one pregnancy in 29 procedures compared with seven pregnancies in 30 procedures) OR= 0.19, 95% CI= 0.04- 0.83 and fertilisation rate (OR= 0.16, 95% CI= 0.05- 0.48) than the micro puncture with perivascular nerve stimulation technique. The other RCT comparing two testicular aspiration techniques (TSA) in 39 participants gave no statistically significantly compared to the aspiration technique without ultrasound. TSA with ultrasound resulted in pregnancy in three out of 16 participants compared with four out of 23 participants (OR= 1.10, 95% CI= 0.21-5.74)

Henry et al., (2006), conducted a Meta analysis study on Stress, distress and outcome of assisted reproductive techniques (ART) at Aarhus fertility centre, Denmark. A systemic review and meta analysis was used and the results found that from a total of 31 prospective studies small, statistically significant, pooled effect sizes were found for stress [ESr=effect size

correlation -0.08; P = 0.02, 95% confidence interval (CI)-0.15to -0.01], trait anxiety(ESr=(-0.14) P = 0.02, 95% CI=(-0.25, -0.03) and state anxiety (ESr = -0.10, P = 0.03, 95% CI=(0.19, -0.01), indicating negative associations with clinical pregnancy rates. A non-significant trend (Esr -0.11, P = 0.06) was found for an association between depression and clinical pregnancy. The study concluded that small but significant associations were found between stress and distress and reduced pregnancy chances with ART.

Foster .R. et al (2005), conducted an exploratory study on the effectiveness of ICSI procedure for the treatment of Infertility at the Hugh Walters Fertility Centre, Kingston, Jamaica. The survey method was used and the results showed that ninety six ICSI cycles were done from January 1, 2003 to December 31 ,2005 and there was a statistically significant impact of age on pregnancy rates, as the mean age of the females in the previously poor or no fertilization in a standard IVF group (39.08 +/- 5.14) was greater than those of the substandard semen group (35.93 +/- 4.22) [p = 0.023] as well as the group with surgical sperm retrieval (32.82 +/- 6.65) [p = 0.019].The study concluded that with ICSI, the fertilisation and pregnancy rates in Jamaica are comparable to international rates regardless of the cause of infertility.

Stanford (2004) conducted a Population Based Study on the Infertility Treatment in a Population Based Sample from the year 2004 to 2005 at Department of Family and Preventive Medicine, Salt Lake City, United States. The population based sample was used and the data was analysed from Pregnancy Risk Assessment Monitoring System (PRAMS) of women with a live birth using data from seven states. The results showed that the most common treatment reported was fertility enhancing drugs (29 %), followed by assisted reproductive technology including In Vitro Fertilization (21%), and Artificial Insemination together with fertility enhancing drugs (15 %). Some women reported using other types of treatment (23%).It was concluded that the PRAMS data provide Insights into the use of infertility treatment among women giving birth in the United States.

Larson (2004) conducted an observational study on the Impact of overweight and underweight on Assisted Reproduction treatment at the Department of Obstetrics and Gynaecology, Oslo hospital, Norway. The method was by the Records of 5019 IVF or ICSI

treatments in 2660 couples were reviewed. The influence of body mass index (BMI) on treatment outcome was examined, after accounting the differences in age and infertility diagnosis. The results showed that the cumulative live birth rate within three treatment cycles was 41.4% [95 % confidence interval (CI) 32 - 50.7] in obese women with BMI greater or equal to 30 kg/m and 50.3 (95% CI= 47 -53) in normal weight women with BMI (18.5-24.9 kg/m). Underweight (BMI <18.5 kg/m2) was not related to an impaired outcome of IVF or ICSI. The researcher concluded that the obesity is associated with lower chances for live birth after IVF and ICSI and with an impaired response to ovarian stimulation.

Wilkes (2003) conducted a primary care perspective study on the utility of Clomiphene Citrate for Ovulation Induction at selected hospitals, Newcastle, United Kingdom. Lottery method was used and 2500 infertile couples were selected. The results showed that the Clomiphene Citrate is a simple, relatively safe, easily administered and well-tolerated efficacious drug and there is, a 10% risk of multiple births associated with its use. It was concluded that the Clomiphene Citrate has been used in general practice for many years and continues to be used. Currently, guidelines describe its use in the general practice setting and the evidence for monitoring its use with mid luteal progesterone estimation or ultrasound scanning was found to be effective.

Michaels et al., (2002) conducted a study on Assisted Reproductive Techniques and the risk of birth defects on its use. It was done in Turkey in 500 infertile couples .The results showed that the children born following Assisted Reproductive Techniques are at risk of birth defects (30-40%) compared with spontaneous conceptions and this should be informed to the couples seeking Assisted Reproductive Techniques (ART).The study concluded that the infertile couples should be intimated about the risk of birth defects and proper guidance and counselling should be given them prior to the treatment.

Malik et al., (2001) conducted a study on Embryo Donation outcome and attitude among embryo donor and recipients. It was identified that 69% of recipients of frozen thawed embryo donated by the infertile couples versus 47% of the donor felt that the child

should be informed about the manner of conception, about 29% of recipients and 42 % of donors thought that child donor couples should have considered of knowing genetic origin and also knowing full blood genetic siblings.

Czech (2001), conducted a study on importance of three dimensional Ultrasonography in Assisted Reproduction at Institute for the Care of Mother and Child, Department of IVF, Prague. The study was done from the current literatures reviews and the results showed that there is a significant importance of 3D power Doppler angiography by measurement of follicular and ovarian vascularity with three indices (VI, FI, VFI) and provides the calculation of ovarian vascularity from the volume. The results showed that an unlimited number of volumes can theoretically be quantified, which makes it an ideal tool for assessment of the ovarian volume and the antral follicle count (AFC) in women undergoing controlled ovarian stimulation. Thus it was concluded that the three dimensional Ultra sonographic is vital in the Assisted Reproductive Technology.

Camus (2000), conducted a prospective randomized trial study on Zygote Intra Fallopian Transfer or In Vitro Fertilization and Embryo Transfer for the treatment of male factor infertility at Centre for Reproductive Medicine, University Hospital, Belgium. One hundred and fifty seven couples were randomly enrolled in the study. Inclusion criteria allowed only first trials of couples with long-standing infertility caused by a male factor. Female factors were excluded. The intervention was in ZIFT; up to three fertilized oocytes were transferred into one single patient fallopian tube by means of laparoscopy 18 hours after insemination. The results showed that Implantation rates of 12.3% and 10% per replaced conceptus were achieved for ZIFT and IVF-ET, respectively. It was concluded that there is no therapeutic advantage of ZIFT over IVF-ET in male factor infertility in terms of reproductive outcome or economic benefit.

James et al., (2000) conducted a study on use of electively cryopreserved microscopically aspirated epididymal sperm with IVF and ICSI for obstructive azoospermia .A retrospective non randomised study for 141 couples undergoing first time IVF or ICSI using either fresh or cryopreserved epididymal sperm explained that of 108 patients using freshly aspirated sperm 72(66.7%) achieved clinical pregnancy of 33 patients in the group using cryopreserved sperm 20(60.6%) achieved clinical pregnancy p=0.47.

Chadha and kanwar (1999) conducted a study on the programme for assisted conception treatment after unexpected failure of fertilization identified 481 couples were grouped according to their fertilization rates per oocyte .The proportion of couples proceedings to further cycles of treatment by IVF or GIFT and resulting fertilization programme rates was compared .There was significant difference between these groups proceedings to treatment (31.50%) compared with others (overall 37%).

PART – II

CONCEPTUAL FRAME WORK

The Conceptual Frame work used in the study was based upon a modified Roy's Adaptation model (1991).Roy's Adaptation Model focuses on the concept of Nursing, person, Health and Environment are all interrupted to thus central concept of adaptation of a person .The theorist concept of Nursing, person ,Health and Environment are all interrupted to thus central concept.

Roy's Model and 4 concepts of the nursing paradigms

A.PERSON

1 .Is the recipient of Nursing care, Roy implies that a client has an active role in the care.

2. Is a bio psychological being that constantly interacts with a changing environment.

a. is an adaptive system that uses innate and acquired coping mechanism to deal with the stressors.

b. can be individual, family , group, community or society.

B.ENVIRONMENT

1. Is defined by Roy as all condition, circumstances and influence surrounding and affecting the development and behaviour of persons and groups.
2. Consists of Internal and External environment which provides input in the form of stimuli.
3. Is always changing constantly interacting with the person.

C.HEALTH

1. Was originally described by Roy as a health – illness continuum with one end of the continuum death and the other end wellness, health and illness are considered an inevitable dimension of the person's life.
2. Is currently defined by Roy as a process of being and becoming an integrated and whole person, health viewed as the goal of the person's behaviour and the person's ability to be an adaptive organism.

D.NURSING

1. Is required when a person expends more energy on coping, less energy available for achieving the goals of survival, growth, reproduction and mastery.

2. Uses the 4 adaptive modes to increase a person's adaptation level during health and illness.
3. Employs activities that promote adaptive, not ineffective responses in situation of health and illness.
4. Is a practice centered discipline geared towards persons and their responses to stimuli and adaptation to the environment.
5. Includes assessment, diagnosis, goal setting, intervention and evaluation.

The main concept of this model is input, throughput and feedback.

INPUT

Input refers to stimuli which can come from the environment or from within a person. Stimuli classified as focal (immediately confronting the human system 0contextual stimuli that are present or residual (non specific such as cultural belief or attitude about illness).

Input also includes person's adaptation level is constantly changing point made up of focal contextual and residual stimuli which represent the present standards of the range of stimuli to which one can respond with ordinary adaptive responses may be either on adaptive or ineffective response. Adaptive response were those that promote integrity and help the person to achieve, the goals of adaptation. Ineffective responses are responses that fail to achieve or threaten the goals of adaptation.

In this study, the focal stimuli were considered as the identification of selected variable such as age, religion, education, type of family, family income, type of marriage and source of health information. The contextual stimuli are all other stimuli present in the situation that investigator considered as assessment of IEC package regarding Assisted Reproductive Techniques among infertile couples by using self assisted structured questionnaire were taken as input.

THROUGHPUT

Throughput makes a person's processes refers to the control mechanism that a person uses an adaptive system. Effectors refer to the physiologic function, self concept and role function involved in adaptation. In this study IEC Package such as video clippings and pamphlets on Assisted Reproductive Techniques were to the clients.

OUTPUT

Output refers to the outcome of the system when the system is a person. Output refers to the person's behavior.

In Roy's system output is categorized as adaptive responses (those that promote a person's integrity) or ineffective responses (those that do not promote good achievement)

In the present study it can be either adaptive responses that is gaining adequate or moderately adequate knowledge and favourable attitude or moderately favourable attitude and non adaptive responses that negative results of remaining in adequate knowledge and unfavorable attitude. The subjects are reassessed and must reinstitute the IEC Package on assisted reproductive techniques in same manner.

FEEDBACK

The feedback is the environment response of the system. Feedback may be position negative or neutral feedback emphasized to stress then the input and throughput.

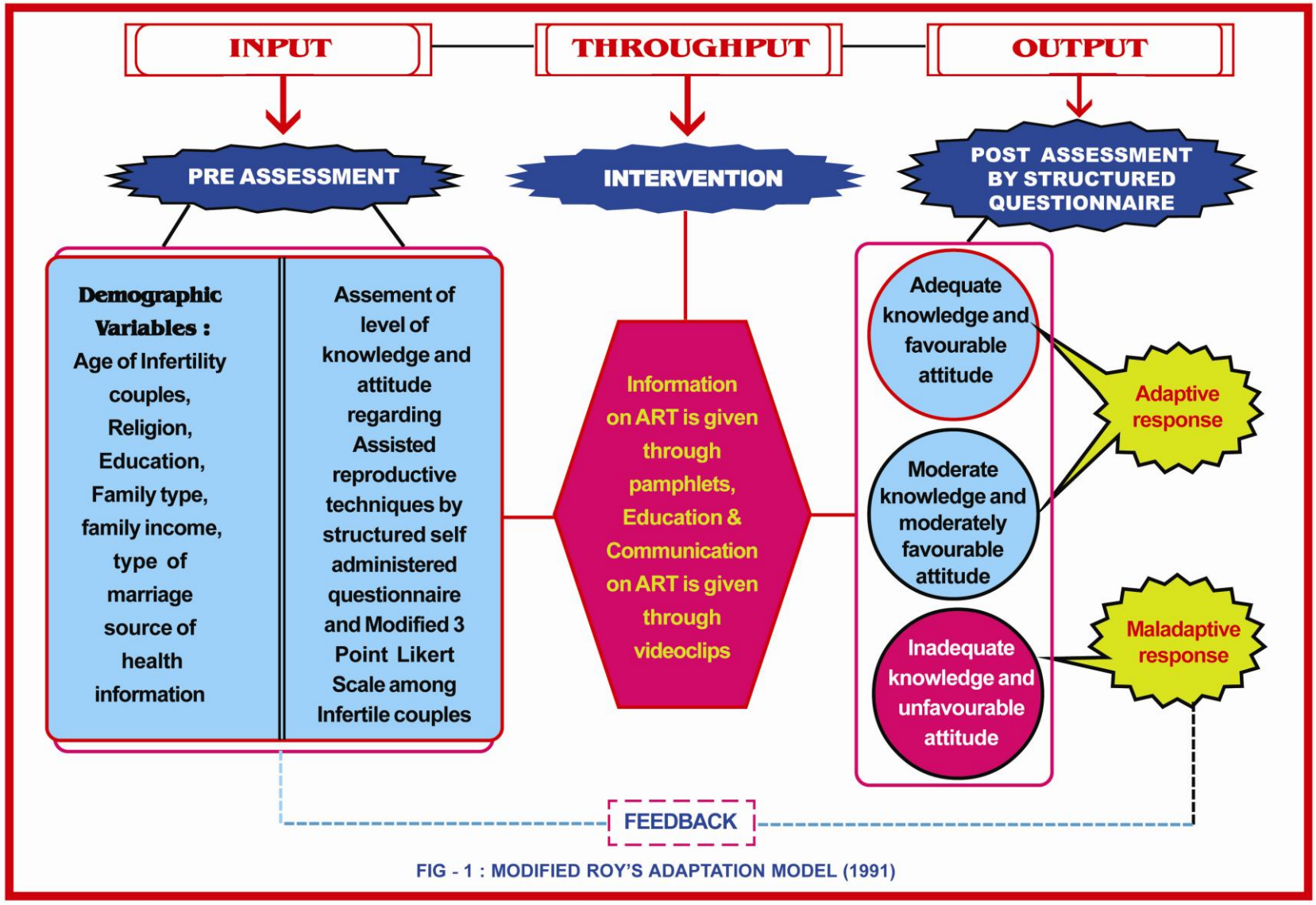

FIG - 1 : MODIFIED ROY'S ADAPTATION MODEL (1991)

CHAPTER – III

RESEARCH METHODOLOGY

The chapter presents the research methodology adopted for the study which includes research approach, research design, research variable, settings, population, sample, sample size, sample technique, method of developing the tool for data collection procedure. The present study is aimed to evaluate the outcome of Information, Education and Communication on Assisted Reproductive Techniques among infertile couples.

RESEARCH APPROACH

The research approach used by the investigator to assess the level of knowledge and attitude with the use of IEC package was evaluative approach.

RESEARCH DESIGN

The selection of the design was based on the purpose of study. The purpose of study was to evaluate the outcome of Information, Education and Communication on Assisted Reproductive Techniques among infertile couples. So, pre experimental one group pre test post test research design was selected.

Pre assessment $\mathbf{O_1}$	**Intervention** **X**	**Post assessment** $\mathbf{O_2}$
O_1	IEC	O_2

VARIABLES UNDER STUDY

The variables under this study were independent variable and dependent variable.

Independent Variable

Information, Education and Communication Package

Dependent Variable

Knowledge and attitude.

RESEARCH SETTING

The study was conducted at GG hospital, Nungambakkam. This Hospital is 25km away from Vel R.S. Medical College of Nursing. It is seventy five bedded hospital and around eighty to hundred couples per day are coming to this hospital as an outpatient. The inpatient strength of the hospital is around forty-five to fifty patients per day. It is a super speciality hospital with fully equipped facilities for ART like IUI, IVF, ICSI, GIFT, ZIFT and Surrogacy. Through ART, it serves about 2000 to 3000 childless couples every year from India and abroad.

POPULATION

Population for the study includes couples who are diagnosed as infertile couples attending GG Hospital for treatment, Chennai.

Target Population

The Target population of the study comprised of all infertile couples attending GG Hospital for infertility treatment.

Accessible Population

Accessible population of the study comprised of the infertile couples aged between 26-45 years attending GG hospital for infertility treatment.

SAMPLE

The study sample comprised of infertile couples who fulfill the inclusion criteria.

SAMPLE SIZE

The sample size consists of sixty infertile couples.

SAMPLING TECHNIQUE

The samples were selected by simple random sampling method (lottery method).The researcher has made a list of total infertile couples from the hundred couples from the outpatient department. From that sixty samples were selected by using lottery method.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

1. Couples with infertility, aged between 26-45 years.
2. Couples who were willing to participate.
3. Couples who were available at the time of data collection.

Exclusion Criteria

1. Single person attending OPD without their partner.
2. Infertile woman with other medical disorders.
3. Couples who could not speak and understand Tamil (or) English.
4. Couples who had already underwent ART procedures.
5. Couples who were professionals.
6. Couples who had already attended any teaching sessions on ART procedures.

METHOD OF DEVELOPING THE TOOL

The tool was constructed after extensive review of literature and discussion with experts to collect the data. Tool used to assess was structured questionnaire and modified 3 point Likert scale.

DESCRIPTION OF THE RESEARCH TOOL

Section A

Demographic variables like Age, Religion, Educational status, Monthly income, Type of marriage, Type of family and Source of health information.

Section B

It consisted of structured questionnaire to assess the knowledge of the infertile couples regarding Assisted Reproductive Techniques. Totally 25 questions were formulated. Scoring key for the knowledge questions was each correct answer carried one mark, incorrect answer carried zero mark.

Scoring key

< 50 %	-	Inadequate knowledge
50 – 75%	-	Moderately adequate knowledge
>75%	-	Adequate knowledge

It is a modified 3 point Likert Scale consisted of ten statements to assess the attitude of infertile couples on Assisted Reproductive Techniques. Out of ten statements, five statements were positively worded statements and five statements were negatively worded statements .The samples were requested to read the statements and put tick mark against their opinions.

S.NO	QUESTIONS	STRONGLY AGREE	AGREE	DISAGREE
1.	Positive	3	2	1
2.	Negative	1	2	3

Total score is 30.

Scoring

<50 %	-	Unfavourable attitude.
50-70 %	-	Moderately favourable attitude.
>75 %	-	Favourable attitude.

VALIDITY OF THE TOOL

The tool was validated by four nursing experts and two Gynaecologists. All suggestions were considered and appropriate changes were made and the corrected tool was found to be valid.

RELIABILITY OF THE TOOL

The reliability tool was assessed by doing pilot study. The reliability of tool was established by split half method. The reliability was done by using Karl- Pearson's correlation coefficient method with r = 0.86 which was highly reliable.

ETHICAL CONSIDERATIONS

The study was conducted after the approval of dissertation committee and formal consent was obtained from the Gynaecologists, Medical officer, and from administrative office of GG Hospital. The researcher explained purpose of the procedure and obtained oral consent from the study samples before intervention. All information about samples was kept confidential.

PILOT STUDY

In order to establish validity and reliability of the tool prepared and to know the feasibility, Pilot study was conducted from 7/6/2011to 12/06/2011 in srushti hospital at ramapuram. A formal permission was obtained from the Medical director of the hospital and 6 samples were selected for study for both pre test and post test by using simple random sampling technique (lottery method). Pre existing level of knowledge and attitude was assessed and provided Information, Education and Communication package and after 6 days the post test level of knowledge was assessed with same questionnaire. The statistical analysis of the pilot study suggested a positive correlation of IEC package on Assisted Reproductive Techniques. The 'r' value 0.86 was found to be reliable and appropriate. Hence the IEC package was decided to be followed in the main study.

DATA COLLECTION PROCEDURE

A formal permission was obtained from the administrative office of GG Hospital, Chennai. The method adopted for data collection was interview method by the investigator. Rapport was established with the subjects and a brief introduction about the research purpose and about tool was given. Sixty samples were selected for study for both pre test and post test by using simple random sampling technique (lottery method).The researcher explained the purpose of the procedure and obtained oral consent from the study samples before intervention. All information about samples was kept confidential. Pre existing level of knowledge and attitude by

using modified 3 point Likert scale was assessed by using the structured questionnaire and provided Information, Education, Communication package by using video teaching and providing pamphlets and after 6 days the post test level of knowledge and attitude was assessed with same questionnaire.

Pre test	**No. of Subjects**	**Intervention**	**Post Test**
15.06.11	1	Information Education Communication on Assisted Reproductive Techniques through video teaching and pamphlets.	Post test conducted after 6 days interval of giving intervention
17.06.11	6		
18.06.11	2		
19.06.11	4		
20.06.11	6		
22.06.11	1		
24.06.11	5		
25.06.11	3		
26.06.11	5		
28.06.11	6		
29.06.11	2		
30.06.11	5		
01.07.11	3		
04.07.11	6		
07.07.11	3		
09.07.11	2		

DATA ANALYSIS PROCEDURE

Descriptive and inferential statistics were used to analyze the data; analysis of demographic variables was done in terms of frequency and percentage distribution. Independent sample‘t’ test was used to analyze the outcome between pre test and post test group and the correlation was found. Chi–square test was used to analyze the association between the demographic variables.

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretations of data collected from sixty infertile couples on assisted reproductive techniques and to evaluate the outcome of Information Education and Communication on Assisted Reproductive Techniques (ART) among infertile couples attending G.G Hospital, Chennai.

ORGANISATION OF DATA

The findings of the study were grouped and analyzed under the following sections.

Section A : Description of demographic variables

Section B : Assessment of pretest and post test level of knowledge among infertile couples on assisted reproductive techniques.

Section C : Assessment of pretest and post test level of attitude among infertile couples on assisted reproductive techniques.

Section D : Comparison of pretest and post test level of knowledge among infertile couples on assisted reproductive techniques.

Section E: Comparison of pretest and post test level of attitude among infertile couples on assisted reproductive techniques.

Section F: Correlation of post test level of knowledge with attitude on assisted reproductive techniques.

Section G: Association of post test level of knowledge among infertile couples on assisted reproductive techniques with the demographic variables.

Section H: Association of post test level of attitude among infertile couples on assisted reproductive techniques with the demographic variables.

SECTION A

Table I

Frequency and percentage distribution of demographic variables

n =60

Demographic Variables	No.	%
Age		
26 - 33 yrs	25	41.67
34 - 41 yrs	12	20.00
42 - 49 yrs	23	38.33
Religion		
Hindu	24	40.00
Christian	17	28.33
Muslim	11	18.33
Others	8	13.33
Education		
No formal education	-	-
Primary	12	20.00
High school	17	28.33
Higher secondary	18	30.00
Under graduate	10	16.67
Post graduate	3	5.00
Family type		
Joint family	27	45.00
Nuclear family	33	55.00
Family income		
<Rs.2000	1	1.67
Rs.2001 – 4000	16	26.67
Rs.4001 – 6000	29	48.33
>Rs.6000	14	23.33
Type of marriage		
Consanguineous	20	33.33

Demographic Variables	No.	%
Non-consanguineous	40	66.67
Source of health information		
Health worker	16	26.67
Relatives	15	25.0
Media	29	48.33

Table I depicts the frequency and percentage distribution of demographic variables of the infertile couples undergoing infertility treatment with respect to age, religion, educational status, type of family, income of the family, type of marriage and source of health information

Regarding age of the infertile couples, majority of infertile couples 25(41.67%) were belongs to 26-33 years of age, 23(38.33%) were belongs to 42-49 years and 12(20%) were belongs to 34-41 years of age. (Fig: ii)

Regarding religion among the infertile couples, majority of infertile couples 24(40%) were belongs to Hindu religion, 17(28.33%) were belongs to Christian religion, 11(18.33%) were Muslims and 8(13.33%) were belongs to other religion respectively. (Fig: iii)

Regarding educational status among the infertile couples, majority of infertile couples 18(30%) had higher education, 17(28.33%) had high school education, 12(20%) had primary education, 10(16.67%) had under graduate education and under graduate education, 3(5%) had post graduate education and no one had formal education respectively. (Fig: iv)

Regarding type of family among the infertile couples, majority of infertile couples 33(55%) were belongs to nuclear family and 27(45%) infertile couples belongs to joint family respectively. (Fig: v)

Regarding monthly income among infertile couples, most of the infertile couples 29(48.33%) were having monthly income Rs. 4001-6000, 16(26.67%) were having monthly income of Rs.2001-4000, 14(23.33%) were having monthly income greater than Rs.6000 and only one infertile couple 1(1.67%) having monthly income less than Rs.2000 respectively. (Fig: vi)

Regarding type of marriage among infertile couple, most of the infertile couples 40(66.67%) had non-consanguineous type of marriage and less number of infertile couples 20(33.33%) had consanguineous type of marriage. (Fig: vii)

Regarding source of health information among infertile couples, majority of the infertile couples 29(48.33%) obtains health information from media, 16(26.67%) obtains health information from health workers and 15(25%) obtains health information from relatives respectively. (Fig: viii)

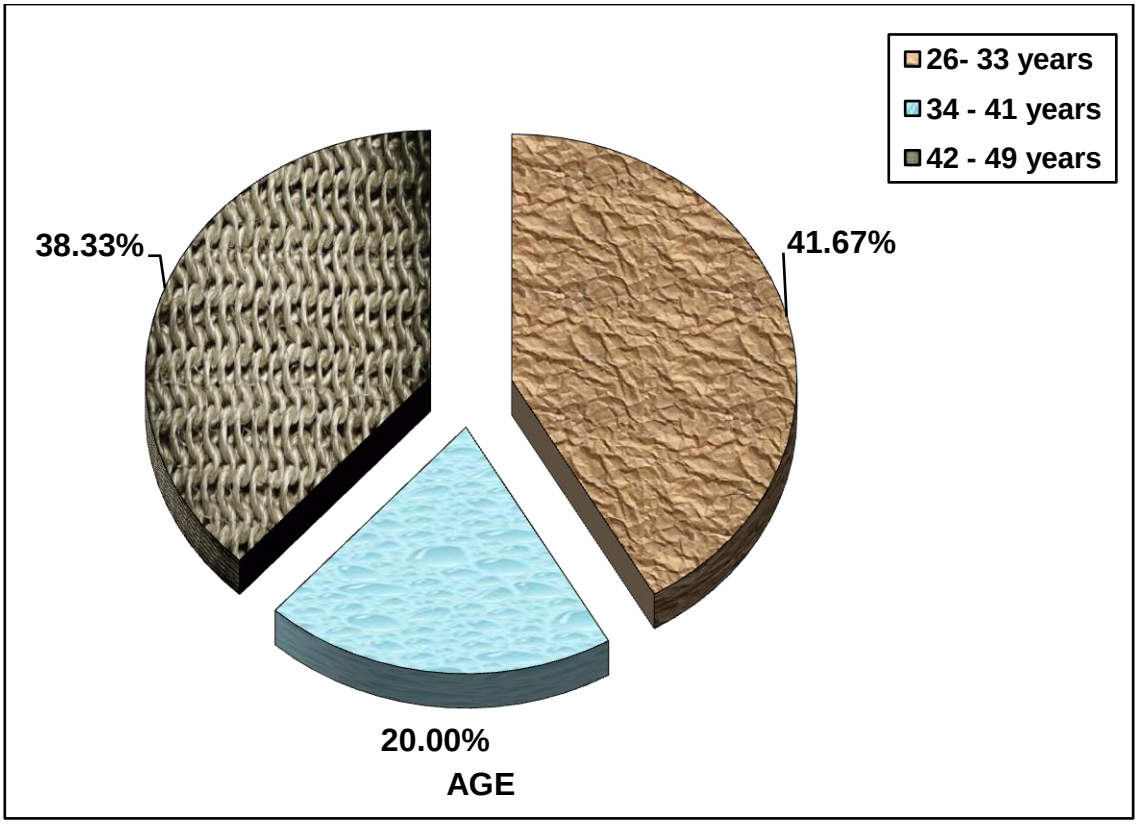

Fig (ii) Percentage distribution of age

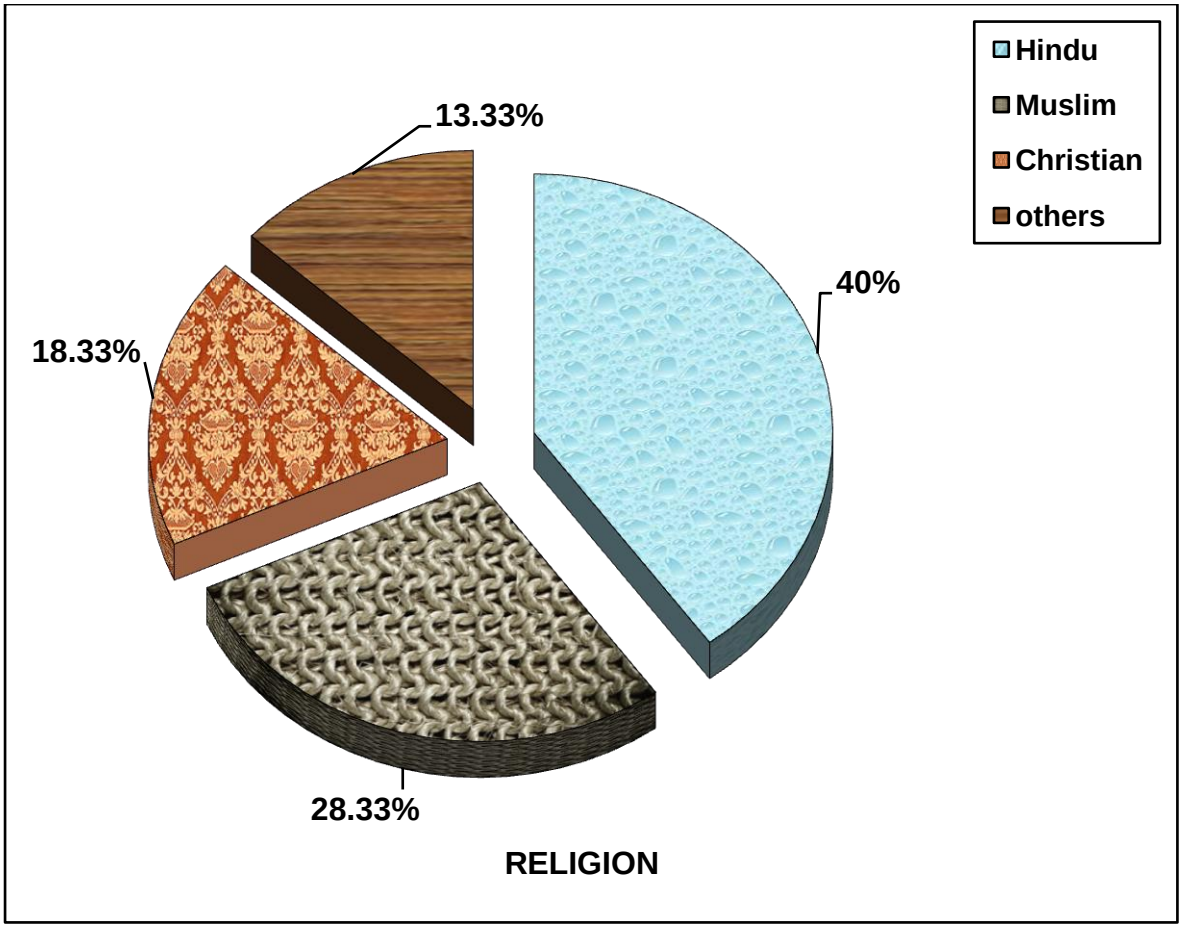

Fig (iii) Percentage distribution of religion

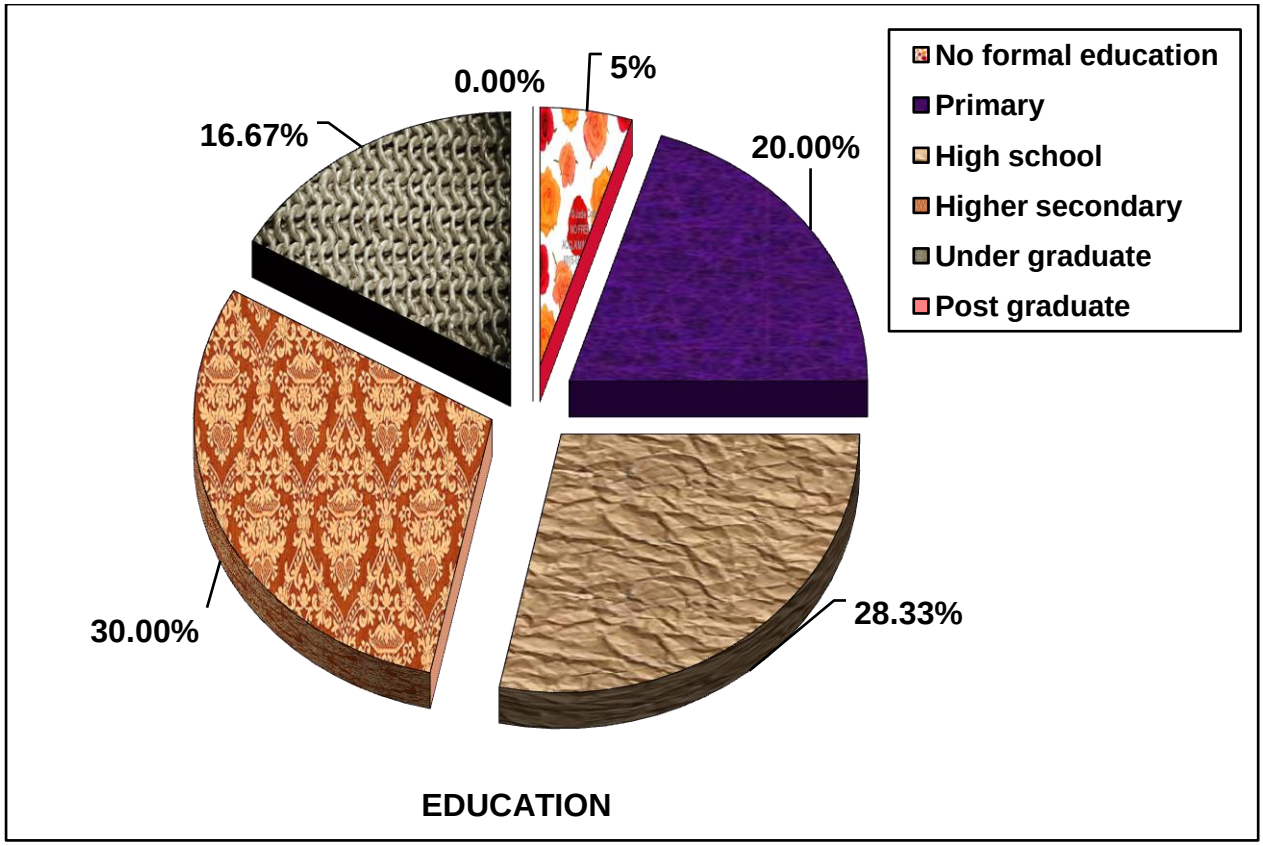

Fig (iv) Percentage distribution of education

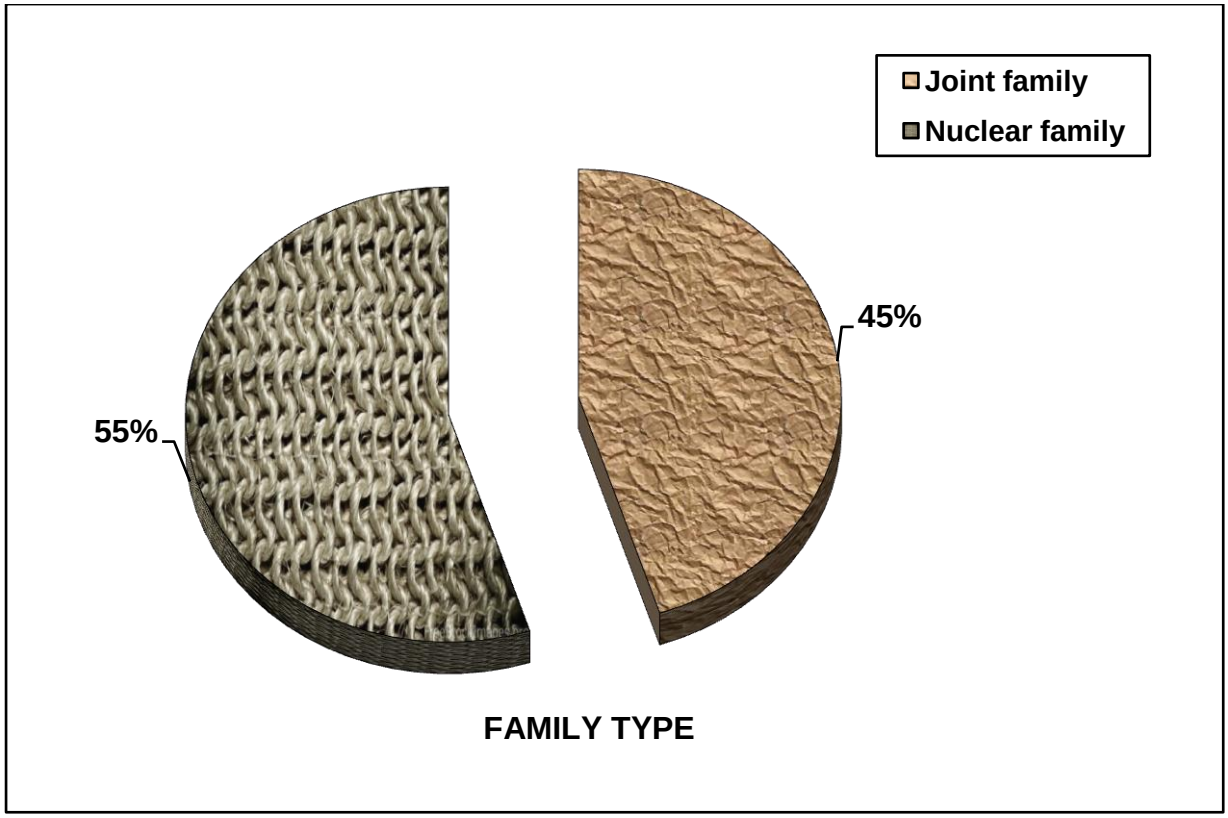

Fig (v) Percentage distribution of family type

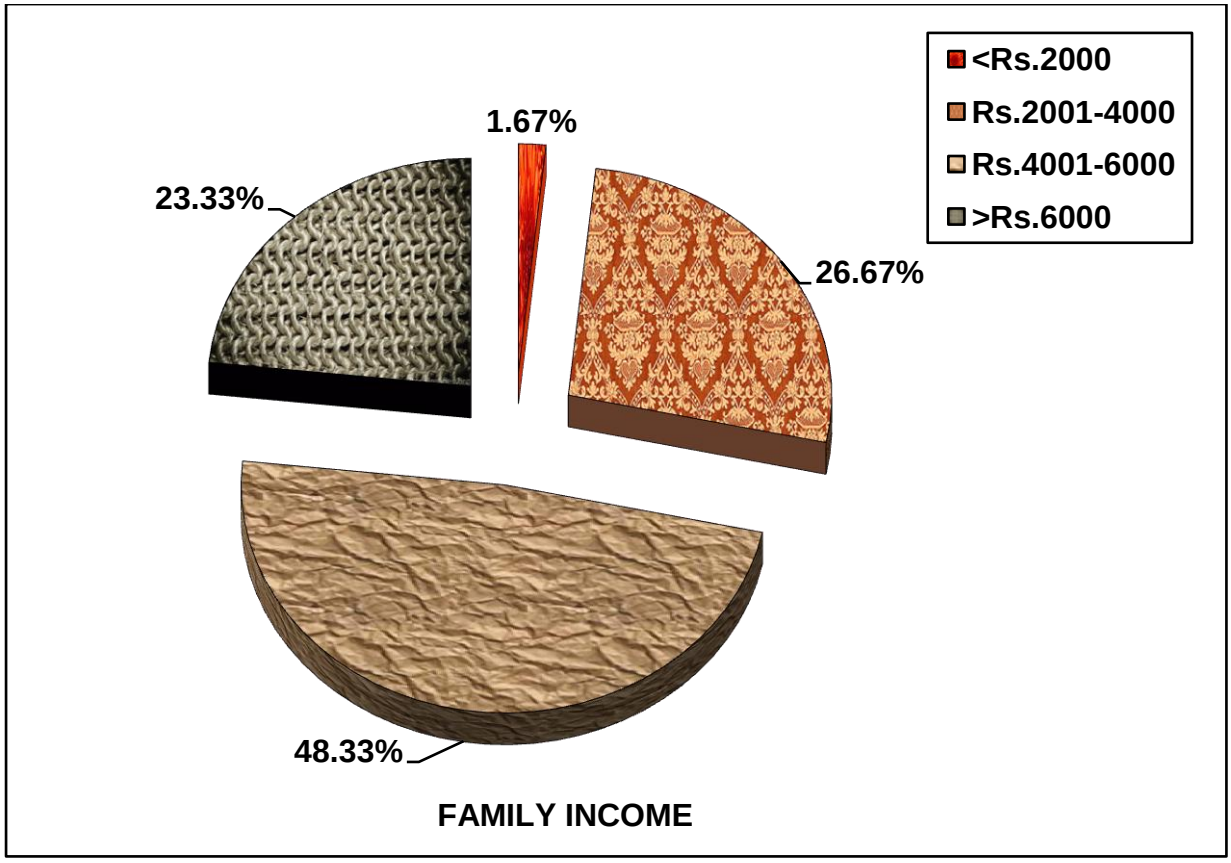

Fig (vi) Percentage distribution of family income

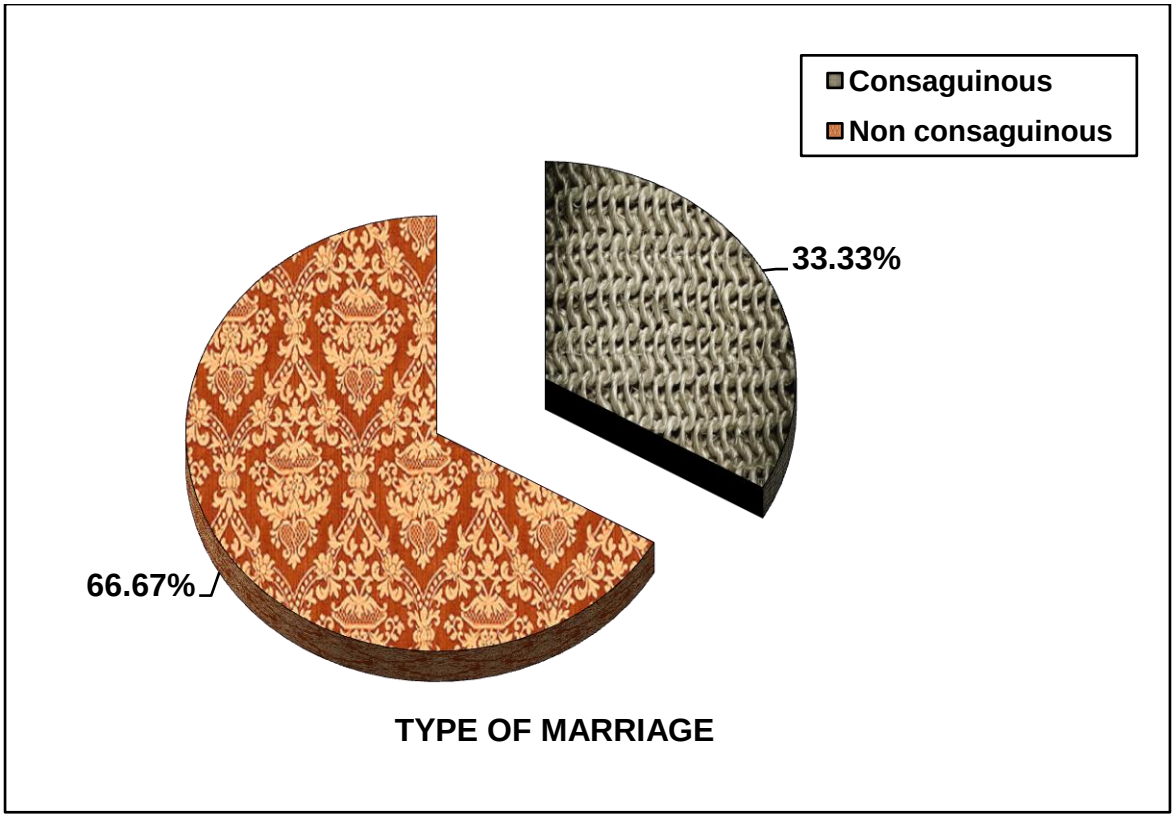

Fig (vii) Percentage distribution of type of marriage

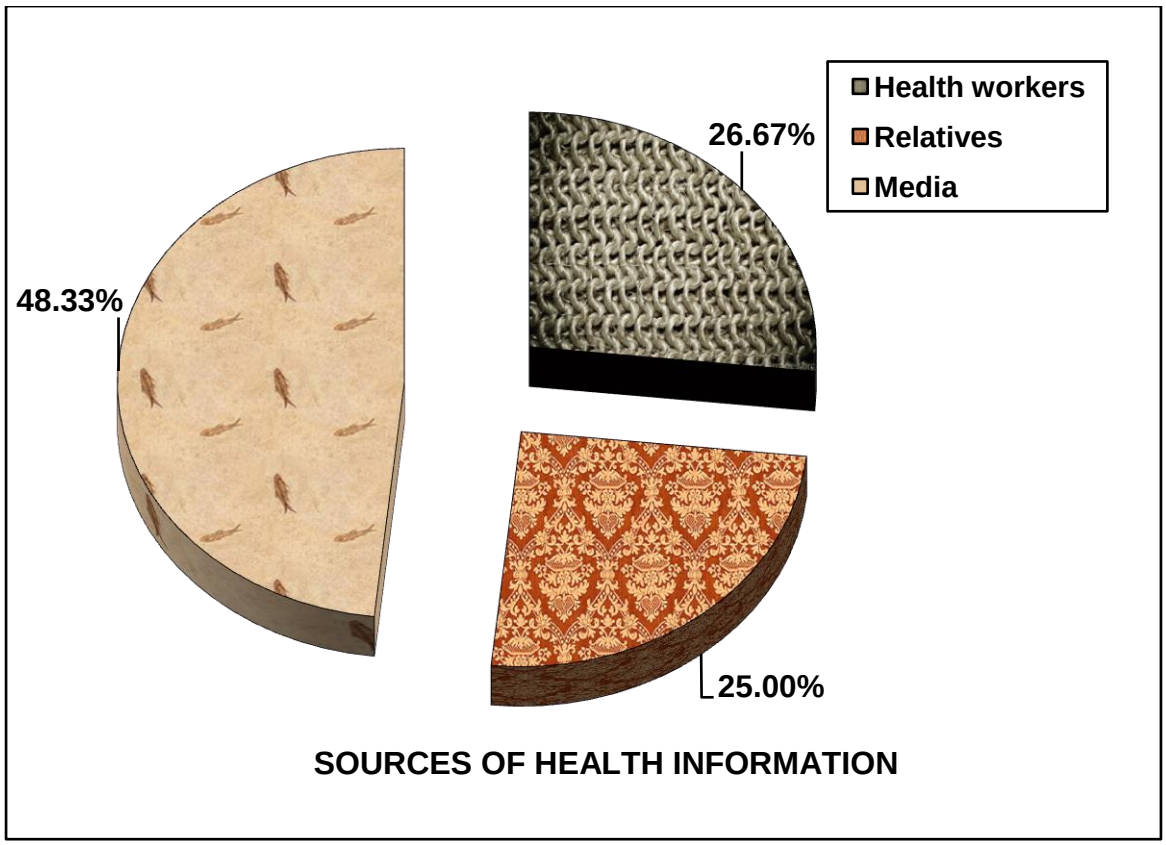

Fig (viii) Percentage distribution of sources of health information

SECTION B

Table II

Frequency and percentage distribution of pre test and post test level of knowledge

n=60

Knowledge	Inadequate (<50%)		Moderately Adequate (50-75%)		Adequate (>75%)	
	No.	%	No.	%	No.	%
Pre test	42	70.0	13	21.67	5	8.33
Post test	0	0	24	40.0	36	60.0

The table II describes that in pretest majority 42(70.0%) had inadequate knowledge, 13(21.67%) had moderately adequate knowledge, 5(8.33%) had adequate knowledge and in the post test majority 36(60.0%) had adequate knowledge, 24(40%) had moderately adequate knowledge and nobody had inadequate knowledge.

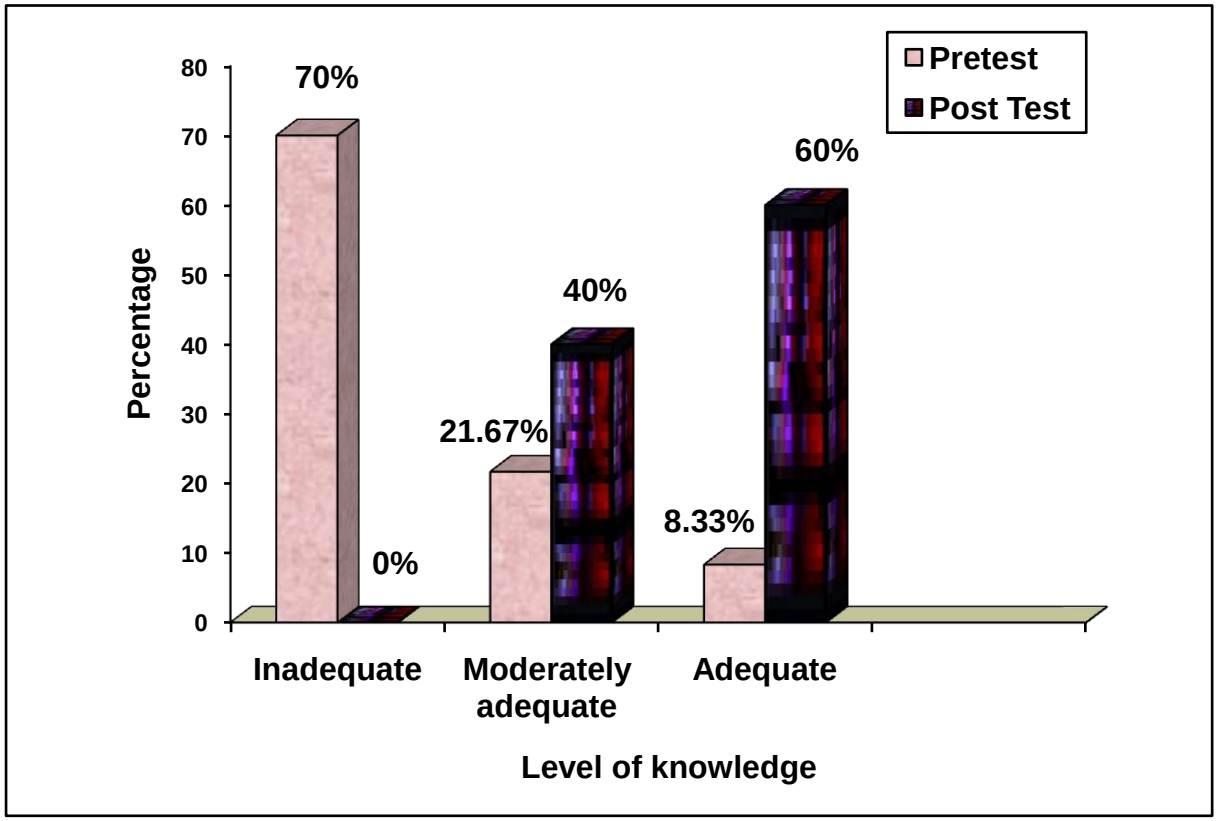

Fig (ix) Percentage distribution of pretest and post test level of knowledge

SECTION C

Table III

Frequency and percentage distribution of pretest and post test level of attitude

n=60

Attitude	Unfavourable (<50%)		Moderately Favourable (50-75%)		Favourable (>75%)	
	No.	%	No.	%	No.	%
Pretest	43	71.67	12	20.0	5	8.33
Post Test	0	0	29	48.33	31	51.67

The table III shows that in the pretest majority 43(71.67%) had unfavourable attitude, 12(20%) had moderately favourable attitude, 5(8.33%) had favourable attitude and in the post test 31(51.67%) had favourable attitude, 29(48.33%) had moderately favourable attitude and nobody had unfavourable attitude.

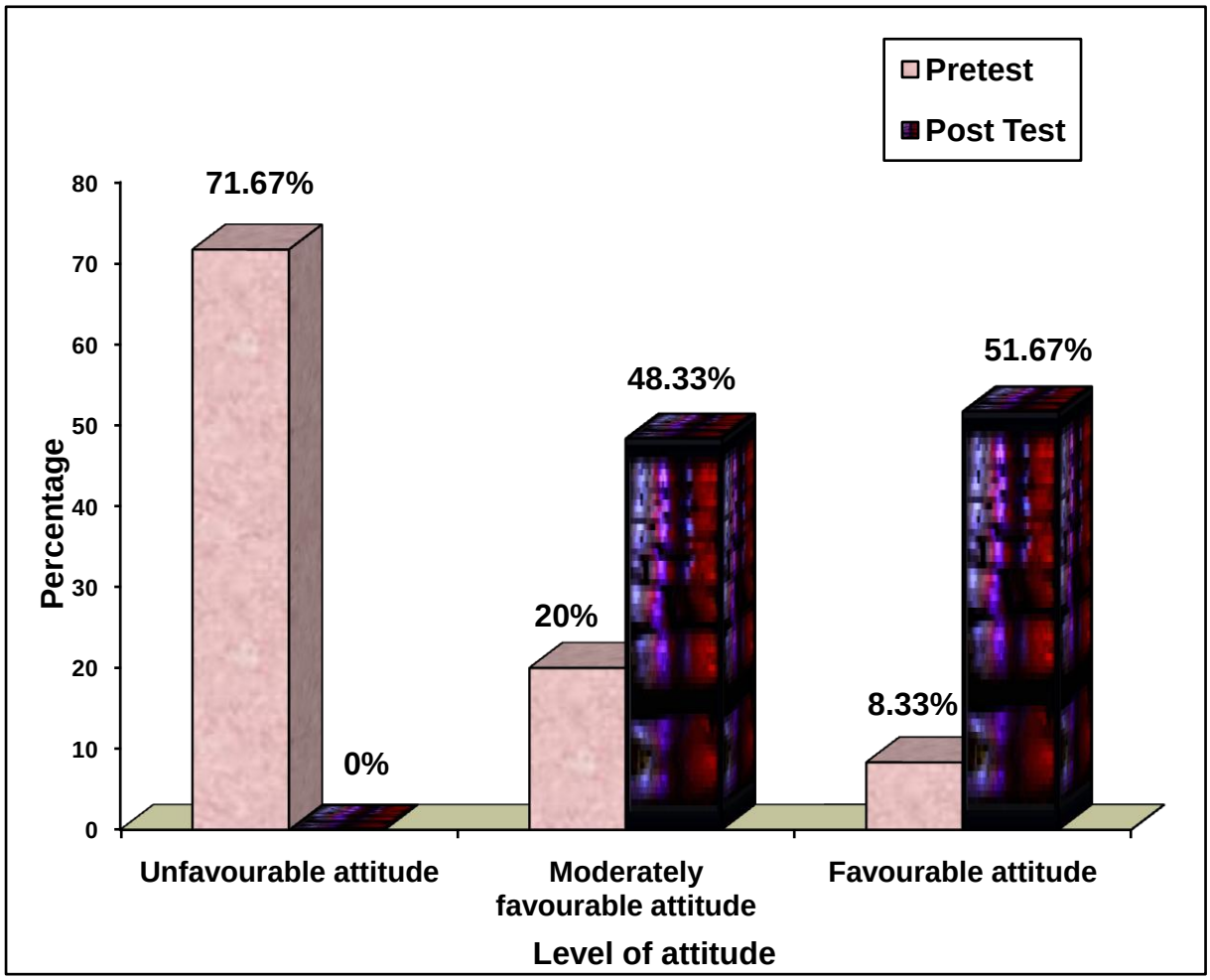

Fig (ix) Percentage distribution of pretest and post test level of attitude

SECTION D

Table IV

Comparison of pretest and post level of knowledge

n=60

Knowledge	Mean	S.D	't' Value
Pretest	7.97	3.87	10.730***
Post Test	14.60	2.73	(S)

***p<0.001, S - Significant

The table IV shows that in the pretest mean score was with 7.97S.D 3.87 and in the post test the mean score was 14.60 with S.D 2.73. The calculated't' value was 10.730 which was statistically highly significant at p<0.001 level.

SECTION E

Table V

Comparison of pretest and post level of attitude

n=60

Attitude	Mean	S.D	't' Value
Pretest	13.38	5.28	t = 15.158***
Post Test	20.0	3.71	p = 0.000, S

***p<0.001, S - Significant

The table V shows that in the pretest mean score was 13.38 with S.D 5.28 and in the post test the mean score was 20 with S.D 3.71. The calculated't' value was 15.158 which was statistically highly significant at p<0.001 level.

SECTION F

Table VI

Correlation of post test level of knowledge with attitude on Assisted Reproductive Techniques

n=60

Variable	Mean	S.D	'r' value
Knowledge	14.60	2.73	r=0.886**
Attitude	20.00	3.71	p=0.004(S)

**p<0.01, S-Significant

Table VI shows that in the post test level of knowledge mean was 14.60 S.D 2.73 and post test level of attitude mean was 20.00 S.D 3.71 .The calculated 'r' value was 0.886 which was statistically highly significant at p<0.001 level and shows a positive correlation of knowledge with attitude.

SECTION G

TABLE VII

Association of post test level of knowledge among infertile couples on assisted reproductive techniques with demographic variables

n=60

Demographic Variables	Moderately Adequate		Adequate		Chi-Square Value
	No.	%	No.	%	
Age					$\chi^2 = 3.702$ d.f = 2 p = 0.157 N.S
26 - 33 yrs	11	18.3	14	23.3	
34 - 41 yrs	7	11.7	5	8.3	
42 - 49 yrs	6	10.0	17	28.3	
Religion					$\chi^2 = 3.906$ d.f = 3 p = 0.272 N.S
Hindu	6	10.0	18	30.0	
Christian	9	15.0	8	13.3	
Muslim	5	8.3	6	10.0	
Others	4	6.7	4	6.7	
Education					$\chi^2 = 17.053$ d.f = 4 p = 0.002 S***
No formal education	-	-	-	-	
Primary	6	10.0	6	10.0	
High school	12	20.0	5	8.3	
Higher secondary	4	6.7	14	23.3	
Under graduate	-	-	10	16.7	
Post graduate	2	3.3	1	1.7	
Family type					$\chi^2 = 2.873$ d.f = 1 p = 0.090 N.S
Joint family	14	23.3	13	21.7	
Nuclear family	10	16.7	23	38.3	
Family income					$\chi^2 = 10.621$ d.f = 3 p = 0.014 S*
<Rs.2000	-	-	1	1.7	
Rs.2001 – 4000	10	16.7	6	10.0	
Rs.4001 – 6000	13	21.7	16	26.7	
>Rs.6000	1	1.7	13	21.7	
Type of marriage					$\chi^2 = 15.313$ d.f = 1 p = 0.000 S***
Consanguineous	15	25.0	5	8.3	
Non-consanguineous	9	15.0	31	51.7	

Source of health information					$\chi^2 = 13.870$ d.f = 2 p = 0.001 S***
Health worker	8	13.3	8	13.3	
Relatives	11	18.3	4	6.7	
Media	5	8.3	24	40.0	

*p<0.05, ***p<0.001, S – Significant, N.S – Not Significant

The table VII shows that the demographic variable education, family income, type of marriage and source of health information had shown statistically significant association with the post test level of knowledge and the other demographic variables had not shown any statistical significant association with the post test level of knowledge.

SECTION H

Table VIII

Association of post test level of attitude among infertile couples on assisted reproductive techniques with demographic variables

n= 60

Demographic Variables	Moderately Favourable		Favourable		Chi-Square Value
	No.	%	No.	%	
Age					$\chi^2 = 0.699$ d.f = 2 p = 0.705 N.S
26 - 33 yrs	12	20.0	13	21.7	
34 - 41 yrs	7	11.7	5	8.3	
42 - 49 yrs	10	16.7	13	21.7	
Religion					$\chi^2 = 2.056$ d.f = 3 p = 0.561 N.S
Hindu	9	15.0	15	25.0	
Christian	10	16.7	7	11.7	
Muslim	6	10.0	5	8.3	
Others	4	6.7	4	6.7	
Education					$\chi^2 = 12.904$ d.f = 4 p = 0.012 S*
No formal education	-	-	-	-	
Primary	8	13.3	4	6.7	
High school	11	18.3	6	10.0	
Higher secondary	5	8.3	13	21.7	
Under graduate	2	3.3	8	13.3	
Post graduate	3	5.0	-	-	
Family type					$\chi^2 = 2.347$ d.f = 1 p = 0.126 N.S
Joint family	16	26.7	11	18.3	
Nuclear family	13	21.7	20	33.3	
Family income					$\chi^2 = 9.550$ d.f = 3 p = 0.023 S*
<Rs.2000	-	-	1	1.7	
Rs.2001 – 4000	12	20.0	4	6.7	
Rs.4001 – 6000	14	23.3	15	25.0	
>Rs.6000	3	5.0	11	18.3	

Type of marriage					$\chi^2 = 1.635$ d.f = 1 p = 0.201 N.S
Consanguineous	12	20.0	8	13.3	
Non-consanguineous	17	28.3	23	38.3	
Source of health information					$\chi^2 = 8.032$ d.f = 2 p = 0.018 S*
Health worker	6	10.0	10	16.7	
Relatives	12	20.0	3	5.0	
Media	11	18.3	18	30.0	

*p<0.05, S – Significant, N.S – Not Significant

The table VIII shows that the demographic variable education, family income and source of health information had shown statistically significant association with the post test level of attitude and the other demographic variables had not shown any statistical significant association with the post test level of attitude.

CHAPTER – V

DISCUSSION

This chapter discusses the findings of the study derived from descriptive and inferential statistical analysis and its pertinence to the objectives set for the study and related literature of the study.

The statement of the problem was "A study to assess the outcome of Information, Education, and Communication (IEC) package on Assisted Reproductive Techniques (ART) among infertile couples attending GG Hospital – Chennai (2011)".

The objectives were

1. To assess the pre test level of knowledge and attitude on Assisted Reproductive Techniques among infertile couples.
2. To assess the post test level of knowledge and attitude on Assisted Reproductive Techniques among infertile couples.
3. To determine the outcome of Information, Education, Communication (IEC) regarding Assisted Reproductive Techniques (ART) among infertile couples.
4. To co-relate the post test level of knowledge with attitude on Assisted Reproductive Techniques.
5. To associate the post test level of knowledge and attitude on Assisted Reproductive techniques with the selected demographic variables.

The demographic variables selected in the study were age of the infertile couples, religion, educational status, monthly income, type of marriage, type of family and source of health information.

The frequency and percentage distribution of demographic variables shows that, majority 25(41.67%) were in the age group of 26-33years, 24(40%) belongs to Hindu religion, 18(30%) completed higher secondary education, 33(55%) were from nuclear family, 29(48.33%) earns

between Rs.4001-6000, 40(66.67%) were non consanguinuous marriage, 29(48.33%) obtains health information from media.

The first objective was to assess the pre test level of knowledge and attitude on Assisted Reproductive Techniques among infertile couples.

The analysis shows that in the pre test level of knowledge, majority of the infertile couples 42(70%) had inadequate knowledge and majority 43(71.67%) had unfavourable attitude on Assisted Reproductive Techniques.

This finding is also consistent with the findings of Hanley, J., (2006) conducted a study on the pre test level of knowledge among the 200 infertile couples in Italy and showed that infertile couples had inadequate knowledge on the Assisted Reproductive Techniques.

The second objective was to assess the post test level of knowledge and attitude on Assisted Reproductive Techniques among infertile couples.

The assessment of post test level of knowledge regarding Assisted Reproductive Techniques among sixty infertility couples showed that, majority 36(60%) of the infertile couples had adequate knowledge, 24(40%) of the infertile couples had moderately adequate knowledge and none of the infertile couples had inadequate knowledge. Assessment of post test level of attitude regarding Assisted Reproductive Techniques showed that majority 31(51.67%) of the infertile couples had developed favourable attitude and 29(48.33%) of the infertile couples had developed moderately favourable attitude and none of the couples had unfavourable attitude. After being exposed to information, education, communication package, it showed that knowledge and attitude scores had been markedly increased.

The study findings were consistent with the study findings of Shu-Hen, S., (2002) which was a comparative study on the post test level of knowledge among the 356 Taiwanese infertile couples between experimental and control group. The pre test was assessed through direct interview techniques and the informational support about Assisted Reproductive Techniques was given to the experimental group, but for the control group pre test and post test was assessed without giving any information. The post test was assessed for both the groups which showed

that the Taiwanese infertile couples who received informational support gained more knowledge than the control group, those who did not receive this information.

The third objective was to determine the outcome of IEC regarding ART among infertile couples.

Table IV showed that the comparison of pre test and post test level of knowledge of infertile couples using paired‘t’ test .The findings revealed that the mean value of pre test was 7.97 with S.D of 3.87 and the mean value of post test was 14.60 with S.D of 2.73.The improved mean value was 6.63.The paired ‘t’test was 10.730 which was highly significant at $p<0.001$, which confirmed that there was statistically significant difference between the pre test and post test level of knowledge.

Table V showed that the comparison of pre test and post test level of attitude of infertile couples using paired‘t’ test .The findings revealed that the mean value of pre test was 13.38 with S.D of 5.28 and the mean value of post test was 20.0 with S.D of 3.71.The improved mean value was 6.62.The paired‘t’ test was 15.158 which was highly significant at $p<0.001$, which confirmed that there was statistically significant difference between the pre test and post test level of attitude.

The study findings were found to be consistent with the study findings of sujatha (2005), which revealed that the infertile women committed to the teachings of the staff nurses were generally knowledgeable about ART and supportive to other couples who undergo infertility treatment.

Hence, the research hypothesis H1 stated earlier that there is significant difference between the pre test and post test level of knowledge and attitude among infertile couples on assisted reproductive techniques was accepted.

The conceptual framework of this study was based on modified Roy’s adaptation model. This model has varying degree of stimuli from which system receives input and gives back output in the form of person’s behaviour which is said to be adaptive responses. The first concept of Roy’s model was input which was made by assessing the existing level of knowledge and attitude by means of pre test .Second concept was throughput which was by using IEC

package as through pamphlet and video teaching .Third concept was output which was made by evaluating the post test assessment level of knowledge and attitude regarding assisted reproductive techniques.

The fourth objective was to correlate the post test level of knowledge with attitude on Assisted Reproductive Techniques.

Data from table VI revealed the correlation of post test level of knowledge and attitude. The 'r' value was 0.886 at $p<0.01$ level which showed that there was a positive correlation of knowledge with attitude. Therefore the research hypothesis H2 stated earlier that there is significant correlation between the post test level of knowledge and attitude was accepted. Thus it is concluded that as the knowledge increases attitude also increases.

The study findings were consistent with the study findings of J Bosco (2007) which was conducted on education for the expectant fathers in work places on reproductive health and infertility. 1328 expectant fathers were included as they were selected randomly .Regular educational programme on reproductive health and infertility was given for 3 classes per week. The physicians were trained specially to conduct the educational programme in the work places. Thus it was concluded that the expectant father had gained more knowledge on reproductive health and the men who will have future infertility problems were detected and counselled and guided for the future reference. Thus it showed that regular educational programme has beneficial effects on infertility and reproductive health such as pregnancy nutrition, exclusive breast feeding and positive and supportive behaviours.

The fifth objective was to associate the post test level of knowledge and attitude on Assisted Reproductive Techniques among infertile couples with the demographic variables.

The association table VII reveals that the demographic variables education, family income, type of marriage and source of health information had shown statistically significant association with the post test level of knowledge and the other demographic variables age, religion and family type had not shown any statistical significant association with the post test level of knowledge.

Also the association table VIII shows that the demographic variables education, family income and source of health information had shown statistically significant association with the

post test level of attitude and the other demographic variables age, religion, family type and the type of marriage had not shown any statistical significant association with the post test level of attitude.

The findings were consistent with the study findings of Rajamani, S., (2008) stated that there was a significant association between educational status of the infertile couples with the knowledge and attitude in the experimental group

The findings of the study were:

The result on the outcome of IEC package on knowledge and attitude revealed that paired‘t’ test value was 10.730 and 15.158 which was highly significant at $p<0.01$. Hence the research hypothesis H1 was accepted.

The correlation of post test level of knowledge with attitude reveals highly significant positive correlation with ‘r’ value0.886 at $p<0.001$ level. Hence the research hypothesis H2 was accepted.

The association of post test level of knowledge with selected demographic variables education, family income, type of marriage and source of health information revealed that the variables were statistically significant association with the knowledge.

The association of post test level of attitude with selected demographic variables education, family income and source of health information revealed that the variables were statistically significant association with the attitude.

The findings conclude that the majority 36(60%) infertile couples had adequate level of knowledge and 24(40%) infertile couples had moderate level of knowledge and none of them had inadequate knowledge. It also reveals that majority 31(51.67%) infertile couples had favourable attitude and 29(48.33%) infertile couples had moderately favourable attitude and none of them had unfavourable attitude. Hence information, education, communication package given was effective on Assisted Reproductive Techniques among infertile couples.

CHAPTER – VI

SUMMARY, NURSING IMPLICATION, RECOMENDATIONS AND LIMITATION

This chapter represents the summary, conclusion, nursing implication, recommendations and limitations based on the objectives of the study.

SUMMARY

Statement of the Problem

A study to assess the outcome of Information, Education, Communication (IEC) package on Assisted Reproductive Techniques(ART) among infertile couple attending GG hospital, Chennai 2011-2012.

The objectives of the study were

1. To assess the pre test level of knowledge and attitude on Assisted Reproductive Techniques among infertile couples.
2. To assess the post test level of knowledge and attitude on Assisted Reproductive Techniques among infertile couples.
3. To determine the outcome of Information, Education, Communication (IEC) regarding Assisted Reproductive Techniques (ART) among infertile couples.
4. To co-relate the post test level of knowledge with attitude on Assisted Reproductive Techniques.
5. To associate the post test level of knowledge and attitude on Assisted Reproductive techniques with the demographic variables.

Assumptions of the study were

1. All Infertile couples may not be have adequate knowledge and favourable attitude on Assisted Reproductive Techniques.
2. Providing IEC package may enhance the infertile couple's knowledge on Assisted Reproductive Techniques.
3. Adequate knowledge on Assisted Reproductive Techniques may lead to positive attitude among infertile couples.

The Research hypothesis formulated was

H_1: There is significant difference between the pre test and post test level of knowledge and attitude among infertile couples on Assisted Reproductive Techniques (ART).

H_2: There is significant correlation between the post test level of knowledge and attitude among infertile couples on Assisted Reproductive Techniques (ART).

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Review of literature was collected from various sources like nursing journals, literacy, unpublished thesis, med line database and wikipedia. A literature review is a summary of gathered sources which provides a basis for the investigator to continue this study.

The study was conducted at GG Hospital, Chennai (2011).

Pre experimental one group pre test post test design was adopted to evaluate the outcome of Information, Education, and Communication on Assisted Reproductive Techniques among infertile couples.

Simple random sampling techniques (lottery method) were used to recruit the samples. The pilot study was done at srushti hospital and the findings revealed the feasibility, reliability and practicability of the tool and the study. The main study was done in GG Hospital on sixty infertility couples undergoing infertility treatment at outpatient department. The infertile couples were assessed for Assisted Reproductive Techniques by giving a structured questionnaire and they undergo an Information, Education, Communication programme on Assisted Reproductive Techniques then post test was done after six days of interval by using same questionnaire. The tool consisting of demographic variables and questions related to Assisted Reproductive Techniques.

The Findings of the study were the majority 25(41.67%) were in the age group of 26 to 33 years, 24(40%) were Hindus, 18(30%) had higher secondary education, 33(55%) lives in nuclear family, 29(48.33%) had monthly income of Rs.4001 – 6000, 40(66.67%) had non-consanguineous type of marriage, 29(48.33%) obtains health information from media.

In pre test level of knowledge, majority of the infertile couples 42(70%) had inadequate knowledge and in the post test majority of the infertile couples 36(60%) had

adequate knowledge on Assisted Reproductive Techniques. In the pre test level of attitude majority of the infertile couples 43(71.67%) had unfavourable attitude and in the post test 31(51.67%) had favourable attitude. In the pre test level of knowledge means score was 7.97 with S.D 3.87 and in the post test level of knowledge the mean score was 14.60 with S.D 2.73. The calculated "t" value 10.730 which was statistically highly significant at $p<0.001$ level and clearly shows that there was significant improvement in the post test level of knowledge. In the pre test level of attitude mean score was 13.38 with S.D 5.28 and in the post test level of attitude the mean score was 20.0 with S.D 3.71. The calculated "t" value 15.158 which was statistically highly significant at $p<0.001$ level and clearly shows that there was significant improvement in the post test level of attitude.

In the association of post test level of knowledge the demographic variables education, family income, type of marriage and source of health information had shown statistically significant association with the post test level of knowledge. In the association of post test level of attitude the demographic variables like education ,family income and source of health information had shown statistically significant association with the post test level of attitude.

NURSING IMPLICATIONS

The investigator has derived the following implications from the study which one of vital concern in the field of nursing practice, nursing administration, nursing education and nursing research

Nursing Practice

Nurses play a vital role in promoting knowledge and attitude on Assisted Reproductive Techniques among the infertile couples has an independent nursing intervention. This can be facilitated by motivating the nurses to

1. Organize Information, Education and Communication programme on Assisted Reproductive Techniques .
2. Organize the counselling session for the nurses.
3. Teach the Infertile couples about Assisted Reproductive Techniques.

Nursing Education

The nurse educator can impart the knowledge on Assisted Reproductive Techniques in the curriculum and the followings have to be included:

1. The holistic care approach should be emphasized more during the training period by nursing students.
2. The student nurses should have greater involvement in the current workshop, seminars and symposium related to Advance Assisted Reproductive Techniques being organized by the same or any other institutions.
3. Articles on Assisted Reproductive Techniques should be made available in nursing journals.
4. Journal should be made available at nursing schools and colleges related to Assisted Reproductive Techniques.

Nursing Administration

1. Nursing administrator must provide opportunities for the nurses to attend the Information, Education and Communication programme on Assisted Reproductive Techniques.
2. In service education can be conducted to disseminate the research finding through continuing nursing to all nurses

Nursing Research

1. Nurse researchers can conduct more research on effectiveness of Information, Education and Communication on Assisted Reproductive Techniques among infertile couples.
2. Disseminate the findings through conferences, seminars, publications in professional, national and international journal and worldwide web.

RECOMMENDATIONS

1. A similar study can be conducted on a large sample size.
2. A similar study can be conducted in different setting.
3. Comparative study used to evaluate the effectiveness of Information, Education and Communication on Assisted Reproductive Techniques among rural and urban residence infertile couples.

4. A similar study can be conducted on a long term basis.
5. A large scale study in various hospitals can be carried out to generalize the findings.

LIMITATIONS

1. The researcher took 20-30 minutes to interview each sample.

2. The investigator found difficulty to conduct the study since the infertile couples initially hesitated to participate in the study.

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APPENDIX – A

LIST OF EXPERTS FOR CONTENT VALIDITY OF THE TOOL

1. **K.Kamala Selvaraj,M.D.,DGO.,Ph.D**
   Obstetrician and Gynaecologist,
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   G.G.Hospital
   Chennai.

2. **C. Susila M.Sc (N)., Phd.**
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   Chennai.

3. **Rosaline Rachel R.N., R.N., M.Sc (N),.Phd.**
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   Indira College of Nursing,
   Tiruvallur.

4. **Latha M.Sc (N),. Phd**.
   HOD – Maternal Health Nursing Department,
   SRM College of Nursing,
   Chennai.

5. **T.R.Dhanalakshmi, M.B.B.S., DGO**
   Reg No. 47691,
   Medical Officer,
   Corporation of Chennai.

APPENDIX - B

LETTER SEEKING EXPERTS OPINION FOR CONTENT VALIDITY

From

Ms.M.Kowsar Bee,
M.Sc.(N) II Year,
Vel R.S Medical College – College of Nursing,
Avadi, Chennai – 600 062.

To

Respected Madam/Sir,

Sub: Requisition for expert opinion on suggestion for content validity of the tools.

I am Ms. M.Kowsar Bee, a student of M.Sc.(Nursing)- II year at Vel R.S Medical College - College of Nursing, Avadi, Chennai – 62, affiliated to Dr.M.G.R.Medical University, Chennai.

As a partial fulfillment of the requirement in the M.Sc. Nursing Programme, I have to complete a dissertation the topic I have selected is **"A study to assess the outcome of Information, Education, Communication(IEC) package on Assisted Reproductive Techniques (ART) among the infertile couples in selected settings".**

Herewith I am sending the developed tools for content validity and for your expert opinion & valuable suggestions.

Thanking you,

Yours sincerely,

(M.Kowsar Bee)

Enclosures:

1. Statement and objectives of the study
2. Blue print of the tools
3. Content validity certificate

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tools developed by **Ms.M.Kowsar Bee,** M.Sc. Nursing student Vel R.S. Medical College – College of Nursing, Chennai on the topic, **"A study to assess the outcome of Information, Education, Communication (IEC) package on Assisted Reproductive Techniques (ART) among the Infertile Couples in selected settings"** is validated by the undersigned and she can proceed with this tool to conduct the main study.

Signature
Dr.C. SUSILA M.sc (N) Ph.D
PRINCIPAL
BILLROTH COLLEGE OF NURSING

Place : Chennai

Date :

BILLROTH COLLEGE OF NURSING
Date:.....
CHENNAI-600 095

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tools developed by **Ms.M.Kowsar Bee,** M.Sc. Nursing student Vel R.S. Medical College – College of Nursing, Chennai on the topic, **"A study to assess the outcome of Information, Education, Communication (IEC) package on Assisted Reproductive Techniques (ART) among the Infertile Couples in selected settings"** is validated by the undersigned and she can proceed with this tool to conduct the main study.

SIGNATURE

Place: Kallai Kulathur

Date: 3/6/2011

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tools developed by **Ms.M.Kowsar Bee,** M.Sc. Nursing student Vel R.S. Medical College – College of Nursing, Chennai on the topic, **"A study to assess the outcome of Information, Education, Communication (IEC) package on Assisted Reproductive Techniques (ART) among the Infertile Couples in selected settings"** is validated by the undersigned and she can proceed with this tool to conduct the main study.

SIGNATURE

Place: Thiruvallur

Date: 6/6/14

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tools developed by **Ms.M.Kowsar Bee,** M.Sc. Nursing student Vel R.S. Medical College – College of Nursing, Chennai on the topic, **"A study to assess the outcome of Information, Education, Communication (IEC) package on Assisted Reproductive Techniques (ART) among the Infertile Couples in selected settings"** is validated by the undersigned and she can proceed with this tool to conduct the main study.

Place: Chennai

Date: 4-6-11

SIGNATURE

MEDICAL OFFICER
SHENOY NAGAR HEALTH
OFWB, CORPORATION OF

APPENDIX – C

INTRODUCTION

Good Morning!

I am a student of Vel. R.S. Medical College – College of Nursing, conducting a study to assess the outcome of Information, Education, and Communication (IEC) package on Assisted Reproductive Techniques (ART) among the infertile couples.

I request you to permit me to include you as my study participant for interventions such as Information, Education, and Communication on assisted reproductive techniques. This will improve your knowledge and provides favourable attitude towards the infertility treatment. Further I request you to kindly extend your co-operation in the smooth completion of the study. I assure you that your responses will be used only for my research purpose and will keep confidential.

Thanking You

SECTION - A

DEMOGRAPHIC VARIABLES

Name : Address :

1. Age

Wife		Husband	
a) 26-33 yrs	[ ]	a) 26-33 yrs	[ ]
b) 34-41 yrs	[ ]	b) 34-41 yrs	[ ]
c) 42-49 yrs	[ ]	c) 42-49 yrs	[ ]

2. Religion
   - a) Hindu [ ]
   - b) Christian [ ]
   - c) Muslim [ ]
   - d) Others [ ]

3. Education
   - a) Illiterate [ ]
   - b) Primary [ ]
   - c) High School [ ]
   - d) Higher Secondary [ ]
   - e) Under Graduate [ ]
   - f) Post Graduate [ ]

4. Family Type
   - a) Joint Family [ ]
   - b) Nuclear Family [ ]

5. Family Income
   - a) <Rs.2000 [ ]
   - b) Rs.2001-4000 [ ]
   - c) Rs. 4001-6000 [ ]
   - d) >Rs. 6000

6. Type of Marriage
   - a) Consanguinous [ ]
   - b) Non-Consanguinous [ ]

7. Sources of health information
   - a) Health Worker [ ]
   - b) Relatives [ ]
   - c) Media [ ]

SECTION – B

STRUCTURED SELF ADMINISTERED QUESTION

CHOOSE THE CORRECT ANSWER

1. Infertility is considered as the inability to conceive a child without the use of contraceptive and with frequent intercourse after
   a) 1 year
   b) 3 year
   c) 5 year [ ]

2. Infertility is a
   a) Physical Problem
   b) Psychological problem
   c) Medical Problem [ ]

3. Infertility Occurs
   a) Only in men
   b) Only in women
   c) Both men and women [ ]

4. The cause for infertility is confirmed by means of
   a) Irregular periods
   b) Heavy bleeding
   c) Investigations [ ]

5. One of the important cause for female Infertility
   a) Mumps
   b) Pelvic Inflammatory Disease
   c) Impaired Sperm Motility [ ]

6. One of the important cause for male Infertility
   a) Oligospermia
   b) Poly cystic ovarian syndrome
   c) Endometriosis [ ]

7. What is meant by Assisted Reproductive Technique (ART)
   a) Technique used to treat infertility
   b) Procedure used for sterilization
   c) Procedure used for hysterectomy [ ]

8. What is the procedure behind ART
   a) Union of Sperm and egg
   b) Removal of uterus
   c) Aspiration of seminal fluid [ ]

9. ART technique is applicable only for
   a) Infertile men
   b) Infertile women
   c) Both [ ]

10. What is In vitro fertilization(IVF)
    a) Technique for replacing the fertilized egg in women's womb
    b) A technique for ovarian stimulation
    c) A Technique for retrieving the egg [ ]

11. Who needs ET procedure as IVF treatment
    a) Spontaneous abortion
    b) Ectopic pregnancy
    c) Uterine Defects [ ]

12. What is ZIFT
    a) Zygote Intra Fallopian Transfer
    b) Zygote Intra Fertilization Transfer
    c) Zygote Intra Uterine Transfer [ ]

13. What is done in ZIFT procedure
    a) egg is removed from ovary
    b) egg is fertilized with father's sperm
    c) fertilized egg at pronuclear stage placed in fallopian tube [ ]

14. What is GIFT

    a) Gamete intra fallopian Transfer

    b) Gamete intra fertilization Transfer

    c) Gamete intra uterine transfer [ ]

15. What is done in GIFT procedure

    a) Male and female gametes are placed in the fallopian tube

    b) Ovulation induced and ovum aspirated

    c) Semen is collected [ ]

16. What is Assisted Hatching

    a) A Technique used to enhance dissolvement of zona pellucida and the embryo implanted

    b) A technique for aspiration of fluid

    c) A technique used for injection of sperm [ ]

17. What do you mean by Intra uterine Insemination(IUI)

    a) Injection of sperm in uterine cavity

    b) Test tube fertilization

    c) Aspiration of Sperm [ ]

18. What is done in Intra cytoplasmic sperm Injection

    a) Sperm is injected in the uterus

    b) Sperm is injected in the petridish

    c) Sperm is injected in the cytoplasm of egg [ ]

19. What is the recent evolution in Infertility treatment

    a) Homeopathy

    b) Test tube baby

    c) Surrogacy [ ]

20. What does surrogacy Indicates

    a) Mother Bearing own child

    b) Women bearing a child for infertile couple

c) Mother who cant bear a child [ ]

21. When the Surrogacy treatment is handled

a) As a first measure of Treatment

b) Alternative for another Treatment

c) As a last measure of treatment [ ]

22. What is done in Surrogacy

a) The embryo is transferred to surrogate woman's uterus

b) The embryo is developed in test tube

c) The embryo is developed in same woman's uterus [ ]

23. Surrogate mother is preferable from the

a) Relative

b) Foreigners

c) List of surrogacy mother given in the centre [ ]

24. In surrogacy it is most important to consider.

a) Financial matter

b) Legal Matter

c) Familial matter [ ]

25. Upto which percentage of abnormal is considered as fertile?

a) 20%

b) 40%

c) 60% [ ]

SECTION C- QUESTIONS TO ASSESS THE ATTITUDE

TICK THE APPROPRIATE ANSWER

QUESTIONS	Strongly Agree	Agree	DisAgree
1. Egg freezing is not only useful for women with medical condition like cancer			
2. Infertility is the problem of both men and women			
3. Infertility is problematic before 30 years			
4. Hips up position, during intercourse is not best position for conception			
5. Cannabis has impact on conception or healthy embryo development			
6. Its all psychological, people just need to relax they will get pregnant			
7. After adopting a baby, a infertile woman will get pregnant			
8. People who have successfully conceived before shouldn't have trouble with fertility later in life			
9. Diet is important for pregnant not for conception			
10. Woman with less body fat gets pregnant more easily			

முகவுரை

வணக்கம், நான் வேல் ஆர்.எஸ். மருத்துவ கல்லூரி செவி– யர் கல்லூரியில் இரண்டாம் ஆண்டு முதுகலை செவி– யர் கல்வியிலும் மாணவி, நான் என் படிப்பின் ஒரு பகுதியாக தகவல் கல்வி மற்றும் அவர்களின் தகவல் பரிமாற்றம் மூலம் கருத்தரிக்கும் உதவி முறைகளை பற்றி குழந்தையின்மை தம்பதிகள் பெற்றுள்ள அறிவுத்திறனை ஊக்குவிப்பது பற்றிய ஒரு ஆய்வை நடத்துகின்றேன். இதன் தொடர்பாக நான் தங்களை எனது ஆய்வின் பங்கேற்பாளராக இணைத்துக்கொள்ள மிக தாழ்மையுடன் கேட்டுக்கொள்கிறேன். இதன் தொடர்பாக நான் கேட்கும் கேள்விகளுக்கு சரியான உங்கள் பதிலை தெரிவிக்கவும், உங்கள் பதிலை நான் என் ஆய்விற்காக மட்டுமே பயன்படுத்துவேன் என்று உறுதியளிக்கிறேன்.

நன்றி!

நேர்காணல் வழிகாட்டி

பிரிவு அ சரியான விவரங்கள் டிக் குறியீட்டின் மூலம் தெரிவிக்கவும்

பெயர் முகவரி

1. வயது

மனைவி		கணவன்	
அ) 26–33 வயது	[ ]	அ) 26–33 வயது	[ ]
ஆ) 34–41 வயது	[ ]	ஆ) 34–41 வயது	[ ]
இ) 42–49 வயது	[ ]	இ) 42–49 வயது	[ ]

2. மதம்

அ) இந்து [ ]
ஆ) கிறிஸ்தவர் [ ]
இ) இஸ்லாமியர் [ ]
ஈ) இதர [ ]

3. கல்வித்தகுதி

அ) படிப்பறிவில்லாதவர் [ ]
ஆ) ஆரம்பக்கல்வி [ ]
இ) உயர்நிலைக் கல்வி [ ]
ஈ) மேல் நிலைக் கல்வி [ ]
உ) இளங்கலை கல்வி [ ]
ஊ) முதுகலை கல்வி [ ]

4. குடும்ப வகை

அ) கூட்டுக்குடும்பம் [ ]
ஆ) தனிக்குடும்பம் [ ]

5. குடும்ப வருமானம்

அ) ரூ.2000க்கும் கீழ் [ ]
ஆ) ரூ.2001–4000 [ ]
இ) ரூ.4001–6000 [ ]
ஈ) ரூ. 6000க்குமேல்

6. திருமண முறை

அ) உறவு முறையில் [ ]
ஆ) அசலார் [ ]

7. சுகாதார செய்திகள் அறியும் வழிகள்

அ) சுகாதார தொழிலாளர்கள் [ ]
ஆ) உறவினர்கள் [ ]
இ) தகவல் தொடர்பு சாதனங்கள் [ ]

பிரிவு ஆ சரியான விடையை தேர்ந்தெடுக்கவும்

1. தம்பதிகள் தற்கா– க கருத்தடை சாதனங்களை பயன்படுத்தாமல், உடலுறவை கொண்டும், கருவுறாமல் எத்தனை ஆண்டுகள் இருந்தால் குழந்தையின்மை எனலாம்

அ) 1 ஆண்டு

ஆ) 3 ஆண்டுகள்

இ) 5 ஆண்டுகள் [ ]

2. குழந்தையின்மை எதை குறிக்கும்

அ) உடல் ரீதியான பிரச்சனை

ஆ) மன ரீதியான பிரச்சனை

இ) மருத்துவ ரீதியான பிரச்சனை [ ]

3. குழந்தையின்மை யாருக்கு வரும்

அ) ஆண்டுகளுக்கு மட்டும்

ஆ) பெண்களுக்கு மட்டும்

இ) இருவருக்கும் [ ]

4. குழந்தையின்மை எது உறுதிபடுத்தும்

அ) சமச்சீரற்ற மாதவிடாய் சுழற்சி

ஆ) அதிக இரத்த போக்கு

இ) மருத்துவ பரிசோதனை [ ]

5. குழந்தையின்மை பெண்களை பாதிக்க ஒரு முக்கிய காரணம்

அ) அம்மை

ஆ) கர்பப்பை சம்பந்தப்பட்ட நோய்கள்

இ) விந்தணுக்களின் வீரியமின்மை [ ]

6. குழந்தையின்மை ஆண்களை பாதிக்க முக்கிய காரணம்

அ) குறைவான விந்தின் எண்ணிக்கை

ஆ) கருமுட்டை கட்டிகள் நோய்

இ) எண்டோமெட்ரியோசஸ் [ ]

7. ART என்றால் என்ன

அ) குழந்தையின்மையின் நவீன கருத்தரிப்பு சிகிச்சை

ஆ) குழந்தை தடுக்கும் சிகிச்சை

இ) கர்ப்பப்பையை நீக்கும் சிகிச்சை [ ]

8. ART முறையில் என்ன செய்யப்படுகிறது

அ) ஆண் விந்தையும் பெண் கருமுட்டையும் இணைக்கப்படுகிறது

ஆ) கர்ப்பப்பை வெளியேற்றப்படுகிறது

இ) விந்து நீர் உரிஞ்சப்படுகிறது [ ]

9. கருத்தறிக்கும் உதவிமுறை யாருக்கு பயன்படுகிறது

அ) குழந்தையின்மையால் பாதிக்கப்பட்ட ஆண்

ஆ) குழந்தையின்மையால் பாதிக்கப்பட்ட பெண்

இ) இருவருக்கும் [ ]

10. IVF என்றால் என்ன

அ) கருவுற்ற முட்டையை பெண்ணின் கர்ப்பப்பையில் செலுத்தும் சிகிச்சை முறை

ஆ) பெண்ணின் கருமுட்டையை ஊக்குவிக்கும் சிகிச்சை முறை

இ) பெண்ணிக் கருமுட்டையை திரும்பப் பெறும் சிகிச்சை முறை [ ]

11. எவர்களுக்கெல்லாம் ET செயல்முறை IVF சிகிச்சையாக தேவைப்படுகிறது.

அ) திடீர் கருச்சிதைவு ஏற்படும்போது

ஆ) கரு காப்பையின் வெளியில் வளர்தல்

இ) கர்ப்பப்பை குறைபாடு [ ]

12. ZIFT என்றால் என்ன

அ) சைகோட் இன்ட்ரா பெலோப்பியன் டிரான்ஸ்பர்

ஆ) சைகோட் இன்ட்ரா பர்டிலைசேஷன் டிரான்ஸ்பர்

இ) சைகோட் இன்ட்ரா யுடைரைன் டிரான்ஸபர் [ ]

13. ZIFT முறையில் என்ன செய்யப்படுகிறது

அ) கருமுட்டைப்பையி– ருந்து முட்டையை வெளியேற்றப்படுகிறது

ஆ) கருமுட்டையையும் ஆண் விந்தையும் சேர்க்கப்படுகிறது

இ) கரு அதன் முதல் நிலை அடையும்போது கருக்குழாயில் செலுத்தப்படுகிறது [ ]

14. GIFT என்றால் என்ன

அ) கேமெட் இன்ட்ரா பெலோப்பியன் டிரான்ஸ்பர்

ஆ) கேமெட் இன்ட்ரா பர்டிலைசேஷன் டிரான்ஸ்பர்

இ) கேமெட் இன்ட்ரா யுடிரைன் டிரான்ஸ்பர் [ ]

15. GIFT முறையில் என்ன செய்யப்பகிறது

அ) ஆணின் உயிரணுவும், பெண்ணின் கருமுட்டையும் கருக்குழாயில் வைக்கப்படுகிறது

ஆ) முட்டை வெளியிடுதலை தூண்டி கருமுட்டை உருஞ்சப்படுகிறது

இ) ஆண்விதை சேர்க்கப்படுகிறது [ ]

16. அஸிட்டிட் ஹெட்சிங் என்றால் என்ன

அ) ஜொனா பெலுசிடாவை கரைத்து கரு ஊன்றி வளர உதவும் செய்முறை நுட்பம்

ஆ) விந்து நிரை உரிஞ்சும் செய்முறை நுட்பம்

இ) ஆண்விந்தினை ஊசி வழி ஏற்றும் செய்முறை நுட்பம் [ ]

17. IUI என்றால் என்ன

அ) ஆண் உயிரணுக்களை ஊசியின் உதவியுடன் கர்ப்பப்பையில் செலுத்துதல்

ஆ) சோதனை குழாயில் கரு உருவாக்குதல்

இ) உயிரணுக்களை உருஞ்சி எடுத்தல் [ ]

18. ICSI முறையில் என்ன செய்யப்படுகிறது

அ) ஆண் விந்து கர்ப்பப்பையில் செலுத்தப்படுகிறது

ஆ) ஆண் விந்து ஆராய்ச்சி மைய சிட்டியில் செலுத்தப்படுகிறது

இ) ஆண் விந்து கருமுட்டையின் சைடோபிளாஸத்தில் செலுத்துப்படுகிறது [ ]

19. குழந்தையின்மை சிகிச்சையில் புதிதாக உருவெடுத்திருப்பது

அ) ஹோமியோபதி

ஆ) சோதனை குழாய் மூலம் குழந்தை பெறுதல்

இ) வாடகைத்தாய் [ ]

20. வாடகைத்தாய் முறை என்றால் என்ன

அ) தாய்தன் குழந்தையைப் பெற்றெடுத்தல்

ஆ) ஒரு குழந்தையில்லா, தம்பதியருக்காக ஒரு பெண் கருவுறுதல்

இ) குழந்தையைப் பெற்றெடுக்க இயலாத தாய் [ ]

21. குழந்தையின்மை சிகிச்சைக்காக வாடகைத்தாய் முறையை தேர்ந்தெடுக்கும் முன்னுரிமை நிலை

அ) முதல் சிகிச்சை முறையாக

ஆ) மற்ற சிகிச்சை முறையாக

இ) இறுதி சிகிச்சை முறையாக [ ]

22. வாடகைத் தாய் முறையில் என்ன செய்யபடுகிறது

அ) எம்பிரியோவை வாடகைத் தாயின் கருப்பையில் செலுத்தப்படுகிறது

ஆ) எம்பிரியோவை சோதனைக் குழாயில் வளர்க்கப்படுகிறது

இ) எம்பிரியோவை சொந்த தாயிடம் செலுத்தப்படுகிறது [ ]

23. வாடகைத் தாய் தேர்ந்தெடுக்கும் பொழுது அதிக முன்னுரிமை கொடுக்க வேண்டியது

அ) உறவினர்

ஆ) வெளிநாட்டைச் சேர்ந்தவர்

இ) மருத்துவமனையில் குறிப்பிடும் வாடகைத்தாய் [ ]

24. வாடகைத்தாய் முறையில் முக்கியமாக கவனிக்க வேண்டியது.

அ) செலவு விஷயங்கள்

ஆ) சட்டரீதியான விஷயங்கள்

இ) குடும்ப விஷயங்கள் [ ]

25. எத்தனை சதவிகிதம் விந்து இயல்பற்றதாக இருந்தால் அதனை செழுமையானவை எனலாம்.

அ) 20%

ஆ) 40%

இ) 60% [ ]

பிரிவு–இ எண்ணங்களை ஆய்வு செய்யும் வினாக்கள்

சரியான விடையை டிக் குறியீட்டின் மூலம் தெரிவிக்கவும்

வினாக்கள்	மிகசம்மதம்	சம்மதம்	மறுப்பு
1. புற்று நோயால் பாதிக்கப்பட்ட பெண்களுக்கு மட்டும் முட்டை பதப்படுத்தும் முறை பயன்படுகிறது			
2. குழந்தையின்மையின் பிரச்சனை ஆண் பெண் ஆகிய இருபாலரையும் பாதிக்கும்			
3. குழந்தையின்மை முப்பது வயதிற்கு முன்பு ஏற்படலாம்			
4. கருஉருவாவதற்கு உடலுறவின் போது இடுப்பு தூக்கப்பட்ட நிலை, சிறந்த நிலையல்ல			
5. போதைப்பொருள் (கெனபீஸ்) உபயோகிகப்பதால் கருவுறுதல் மற்றும் குழந்தையின் வளர்ச்சி பாதிக்கிறது			
6. குழந்தையின்மை மனரீதியான பிரச்சனையாகும், தகுந்த ஓய்வு பெற்றால் கர்ப்பமாகலாம்			
7. ஒரு குழந்தையை தத்தெடுத்தால், குழந்தையில்லா தம்பதியருக்கு குழந்தை பிறக்கும்			
8. ஒரு முறை குழந்தை பெற்ற தம்பதியருக்கு குழந்தையின்மை ஒரு பிரச்சனையல்ல			
9. உணவுமுறை கர்ப்பக்காலத்திற்கு மட்டும் முக்கியமானது கருஉருவாவதற்கு அல்ல			
10. மெல்– ய உடலமைப்பு உள்ளவர்கள் மிக சுலபமாக கருத்தரிப்பர்			

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(College of Nursing)

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www.velrsnursing.com
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To

Sub: Seeking permission for conducting main study – reg.

Respected Sir/Madam,

This is to introduce **Ms.M.Kowsar Bee (Obstetrics & Gynaecological Nursing) Master Degree Nursing student** of this college. She has selected the following topic for her research study to be submitted to the Tamil Nadu Dr. MGR Medical University as partial fulfillment of the master degree in nursing program.

The topic of the study is **"A study to assess the outcome of Information, Education, Communication (IEC) package on Assisted Reproductive Techniques (ART) among infertile couples/attending selected infertility hospital".**

She is interested in conducting the main study at your esteemed institution.

I assure you that our student will abide by the rules and regulations of the setting. I request your at most help in regard to the same.

Thanking you,

Prof.Mrs.M.Anuradha
PRINCIPAL

PRINCIPAL
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Date:

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Website : www.gghospital.in

Date : 15/7/2011

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. M. Kowsar Bee, M.Sc., Nursing student from Vel R.S. Medical College, Avadi has done a research study on " Effectiveness of IEC package on knowledge and attitude regarding assisted reproductive techniques among infertile couples attending infertility clinic" from 15/6/2011 to 15/7/2011.

Kamala Selvaraj

DR. KAMALA SELVARAJ MD DGO PHD
DR. PRIYA SELVARAJ MD MNAMS MCE

CERTIFICATE OF ENGLISH EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the English Version of the dissertation work "**A Study to assess the outcome of Information Education and Communication (IEC) package on Assisted Reproductive Techniques(ART) among infertile couples at selected infertility hospital, Chennai**" done by **Ms. Kowsar Bee.,** II year M.Sc (N) student of Vel.R.S Medical College - College of Nursing, Avadi, Chennai, is edited for English language appropriateness by

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Perambur, Chennai - 600 011

CERTIFICATE OF TAMIL EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the Tamil Version of the dissertation work "**A Study to assess the outcome of Information Education and Communication (IEC) package on Assisted Reproductive Techniques(ART) among infertile couples at selected infertility hospital, Chennai**", **Chennai**" done by **Ms. Kowsar Bee.,** II year M.Sc (N) student of Vel. R. S Medical College - College of Nursing, Avadi, Chennai, is edited for Tamil language appropriateness by I. Maria Franciska Stella

S. Mariafranciska Stella M.A. B.Ed

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ABSTRACT

INTRODUCTION

REVIEW OF LITERATURE

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